Appendix - A

ENGINEERING AND TRAFFIC DATA OF EXPERIMENTAL PAVEMENT CONSTRUCTION SECTION

SUBGRADE SOIL PROPERTY OF LOW-CLASS PAVEMENT EXPERIMENTAL CONSTRUCTION SECTION

Experiment Section No. Lengih	Boring No.			Sieve /	Analysis	Analysis (Passing %	1	by wt.)	·	Liquid	Plasti- city	Natural Moisture	* Socked CBR	Swell	Soil Classification)2.00 mm	200~	(0.075
Environmental Condition	·	37.5	19.0	12.5	Sieve Si. 9.5	Size (mm 4.75	2.00	0.425	0.075		Index	Content	*	*			er er	
Section No. 1	No. 1	001	94	16	88	82	74	56	36	a.	0. 0.	36.43	Ŋ	. 0	SM	92	38	36
Jer. Alfonso to	No. 2			<u>8</u>	6 6	96	26	68	77	. 44	=	36.20	ഗ	21.0	 X	ю	02	7.7
Megalidines rodd	х го	100	96	92	90	84	-	9	56	<u>0.</u>	Ċ.	29.17	<u>0</u>	0	w S	53	45	56
The project road at this	% 4			8	8	- 66	. 26	93	96	64	91	65.93	ю	0.065	¥	ю	=	86
possing accross the level of	S.	001	6	87	. n :	52	88	4	္က	D.	ā. Ž	48.62	o	. 0	SM	42	28	8
corn, cococut, pineappte	9 9				00	თ.` თ	88	97	92	73	25	56.50	۲-	2.42	Ξ	_	۲.	35
oround.	۲۰ ۷۰	:	001	86	98	76	92	85	55	73	ਨੌ	47.13	9	2.05	H S	ĸ	Z '	-
4 6	60 .0.		00	98	96	26	96	46	95	92	24	60.56	ري د	0.15	H W	4	. 4	36
Section No. 2	e Š		56	16	06	86	82	73	64	52	20	24.26	4	0.28	Ξ×	13	82	64
Magallanes to	No. 2		001	98	96	35	18	53	24	Ç.	ď	29.88	δī	ο.	SMS	<u>o</u>	21	24
	ro o Z		8	<u></u>	66	86	46	98	75	58	26	51,55	2	0	Ξ	ဖ	<u></u>	7.5
The road generally run on	0. 4		100	8	86	96	90	82	85 82	7-	71	33.22	<u>o</u>	0.39	M	2	52	5
young corn, mango, banana	ري دن			100	66	98	96	82	1.	4 5	4	28.62	=	0.39	Z L	4	52	- 7-
vertical alignment is rolling	9			100	66	92	8	7.7	2.9	5	ñ	22.98	m	5,45	Σ	<u></u>	25	67
and the surface is gravel.	No. 7		001	26	96	93	87	47	53	56	50	50.14	2	0.24	Σ	₩.	8	ь Б
	No. 8	:	00	B :	76	96	6	28	99	0. Z	Q.	45.54	cv	0	.i ∑	თ	25	99

UNIFIED SOIL CLASSIFICATION

LEGEND: SM:Slity sands, slity gravelly sands.

ML:SIIIts, vary fins asnds, siiity or nisysy fins asnds
MH:Minsensous siiits, distonaces ainta, volcanin seh
GL:Lox plassioity otsys, sendy or siity oisys

Childh phasticity clays sandy clays

NOTE:

Matural Water Content
67 blows per each 3 layer
4 days soaking

SUBGRAGE SOIL PROPERTY OF LOW-CLASS PAVEMENT EXPERIMENTAL CONSTRUCTION SECTION

100 95 95 97 97 97 97 97 97	Experiment Section No.	Boring No.		8	Sieve And	lysis (P	ndlysis (Passing % by wt.)	; by wf.)			Liquid i	Plasti-	Natural 3	*Socked CBR	Sweil	Soil)2.00 mm	200 ~	(0,075
No. 1 100 95 88 86 80 74 65 55 51 12 4510 3 No. 2 100 94 91 88 82 72 51 30 NP NP 24,32 8 No. 4 100 93 91 87 79 68 54 44 52 21 36,44 4 No. 5 100 99 92 92 93 94 70 59 44 14 28,57 10 No. 1 100 90 82 79 71 60 41 22 NP NP 26,18 7 No. 2 100 90 92 93 96 98 67 44 40 15,86 17 No. 2 100 90 99 96 98 67 44 40 15 32,54 8 No. 5 100 90 97 97 94 88 77 60 51 21 39,91 5 No. 5 100 99 97 95 84 63 36 NP NP 39,93 3 No. 6 100 80 76 76 75 76 76 76 76 76	Environmental Condition		37.5	19.0	v	ហ	8 (mm) 4.75		0.425	0.075			Content %	*	%			E	
No. 2 100 96 93 90 64 71 50 43 NP NP 24.32 8	Section No. 3	 	001	8	88	86	80	74	65	23	15	22	45.10	ю	0	Η	26	12	53
No. 3 100 94 91 88 82 72 51 30 NP NP 29.05 4 No. 5 100 93 91 87 79 68 54 44 52 21 36.44 4 No. 5 100 90 82 79 71 60 41 22 70 70 No. 1 100 90 82 79 71 60 41 22 70 71 70 No. 2 100 90 82 77 64 45 28 NP NP 13.86 17 No. 2 100 90 99 98 81 71 57 44 40 15 32.54 8 No. 3 100 90 97 97 94 88 77 60 51 21 39.91 5 No. 4 100 90 76 76 73 66 47 26 NP NP 24.76 14 No. 5 100 90 97 97 95 98 76 47 26 NP NP 24.76 14 No. 6 100 80 76 76 73 66 47 26 NP NP 24.76 14 No. 7 100 99 99 95 99 76 75 60 51 51 39.91 5 No. 7 100 99 99 95 99 76 75 76 76 76 76 77 76 76	Gen. Tries to		8	96.	03.	000	84	<u>ہ</u>	20 2	4 w	ĝ.	ō.	24.32	60	0	ΣS	59	28	ю
How A 100 93 91 87 79 68 54 44 52 21 36.44 4 4 4 14 14 14 14 15 10 10 10 10 10 10 10 10 10 10 10 10 10			<u>0</u>	94	<u></u>	88	85	72	S	30	άχ	a.	29.05	4	0.	w _S	88	2	30
High No. 5 100 99 97 93 84 70 59 44 14 28.57 10 High No. 6 100 95 93 92 86 71 43 24 NP NP 26.18 7 High No. 7 100 90 82 79 71 60 41 22 NP NP 17.32 68 NP NP 17.32 68 NP NP. 1 100 90 87 85 77 64 45 28 NP NP 13.96 17 NP. 1 100 90 89 88 81 71 57 44 40 15 32.34 11 NP. 4 NP. 5 NP NP 52.34 11 NP. 5 NP NP 52.34 88 77 60 51 21 39.91 5 NP NP 52.34 88 NP NP S2.354 88 NP NP NP 52.34 88 NP NP S2.354 88 NP NP NP 52.34 88 NP NP S2.354 88 NP	Through this area of flat terrain the alignment standard		00	ტ ტ	6	45	62	68	\$ 4	4	25	ਨ	36.44	4	0	ပ	35	24	4
No. 7 100 95 93 92 96 71 43 24 NP NP 26.18 7 100 90 82 75 71 60 41 22 NP NP 17.32 68 80 77 67 57 42 29 NP NP 17.32 68 17 100 90 87 85 77 64 45 28 NP NP 15.96 17 100 90 89 96 88 67 43 NP NP 15.96 17 100 90 89 96 88 67 43 NP NP 22.34 11 11 100 90 97 97 94 88 77 60 51 21 39.91 5 35.91 5 35.91	are quite good. The profile however is generally low with	-		901	98	26	10	4	02	59	4 :	4	28.57	Ω.	0.54	Z L	<u>δ</u>	52	69
od No. 7 100 90 82 79 71 60 41 22 NP NP 17.32 68 No. 8 100 86 80 77 67 42 29 NP NP 13.96 17 No. 1 100 90 87 86 88 67 44 40 NP 18 18 11 No. 3 100 90 89 88 81 71 60 51 21 32.54 8 No. 4 100 97 97 94 88 77 60 51 21 39.91 5 No. 5 100 99 97 93 84 63 36 NP NP 24.76 14 No. 6 100 80 76 73 66 47 26 NP NP 24.76 14 No. 7 100 99 99 95 89	water standing in the shatlow ditch depression. Both sides		8	92	65	35	98	7	£.	24	g.	<u>n</u>	26.18	۲.	0	Z.	53	47	24
No. 8 100 86 80 77 67 57 42 29 NP NP 31.96 17 No. 2 100 90 87 85 77 64 45 28 NP NP 19.86 12 No. 3 100 90 89 98 89 67 44 00 15 32.54 11 No. 4 100 97 97 94 88 77 60 51 21 39.91 5 No. 5 100 99 97 95 84 63 36 NP NP 24.76 14 No. 6 100 80 78 76 73 66 47 26 NP NP 24.76 14 No. 7 100 99 95 95 89 76 59 15 39.49 5	is residential and vegetated		001	06	82	62	7	09	2	22	å	D.	17.32	68	0	νs	0	38	22
No. 1 100 90 87 85 77 64 45 28 NP NP 19.86 12 No. 3 100 90 89 98 96 88 67 44 40 15 22.34 11 No. 4 100 90 89 88 81 71 57 44 40 15 32.54 8 No. 5 100 99 97 97 84 63 36 NP NP 39.93 3 No. 6 100 80 78 76 73 66 47 26 NP NP 24.76 14 No. 6 100 80 78 76 73 66 47 26 NP NP 24.76 14 No. 7 100 99 95 95 89 76 59 42 15 39.49 5			100	98	80	7.7	29	25	42	29	ά	S.	31,96	2	0	∑	4 κ	28	62
No. 3 100 90 89 96 88 67 43 NP NP 22.34 11 No. 3 100 90 89 68 81 71 57 44 40 15 32.54 8 No. 4 100 97 97 94 88 77 60 51 21 39.91 5 Lad No. 6 100 80 78 76 73 66 47 26 NP NP 24.76 14 No. 6 100 80 78 76 73 66 47 26 NP NP 24.76 14 No. 7 100 99 95 95 89 76 59 42 15 39.49 5	Section No. 4	No.	901	8	87	85	7.7	64	54	28	문	d N	19.86	12	D	W.S	92	8	28
No. 3 100 90 89 88 81 71 57 44 40 15 32.54 8 10h 40h 10h 97 97 94 88 77 60 51 21 39.91 5 10h 10h 99 97 95 84 63 36 NP NP 39.93 3 10h 10h 10h 76 75 66 47 26 NP NP 24.76 14 10h 75 99 95 95 95 95 76 59 42 15 39.49 5	Gen. Trias to Amodeo		:	001	თ თ .	86	96	88	29	ь Б	g G	Q.	22.34	=	0	× S	ŭ	5	43
no. 4 100 97 97 94 88 77 60 51 21 39.91 5 no. 5 100 99 97 93 84 63 36 NP NP 39.93 3 no. 6 100 80 76 73 66 47 26 NP NP 24.76 14 No. 7 100 99 95 95 89 76 59 42 15 39.49 5			00	06	68	88	ã	7	57	44	6	īΣ	32.54	60	0.13	ပ	6	22	4
No. 5 100 99 97 93 84 63 36 NP NP 39.93 3 3 10 100 80 76 73 66 47 26 NP NP 24.76 14 No. 7 100 99 95 95 89 76 59 42 15 39.49 5	The road crosses through	-		100	26	25	დ. 4	88	7.7	9	5	ন	39,91	ڻ د	0.22	ΗW	2	53	09
No. 6 100 80 78 76 73 66 47 26 NP NP 24.76 14 No. 7 100 99 99 95 89 76 59 42 15 39.49 5	rice fleid on both sides			00	66	26	63	84	63	36	ğ.	Š.	39.93	m :	0	NS.	ω	84	36
7 100 99 99 95 89 76 59 42 15 39.49 5	and horizonial alignment.		00	80	7.8	92	73	99	47	56	å Ž	Q.	24.76	4	0	Σs	ю 4	40	56
		No. 7		00 -	66	66	95	68	76	53	27 :	ភ	39.49	ın .	0.13	Σ	=	ę,	29
8 100 97 96 93 89 78 63 51 41 15 37.98		No. 8	100	26	96	93	69	78	63	23	4	ξ.	37.98	ın .	0.13	Σ.	22	,22	51

UNIFIED SOIL CLASSIFICATION

ML:Silta, very fine sends, stiry or olayey fine sends MM:Micacecus silts, distonsceeus silts, voices ash Chilow pleaticity clays, sandy or allty clays LEGENO: OM: Onley sends, silty gravelly sends SC:Clerce sends olever brace veyelo.

CM:Migh pleaticity clays, sandy clays

67 blows per each 3 layer 4 days soaking * Natural Water Content

SUBGRADE SOIL PROPERTY OF LOW-CLASS PAVEMENT EXPERIMENTAL CONSTRUCTION SECTION

Expariment Section No. Length	9oring No.		ν,	Siave An	alysis (F Sievo S	Siove Analysis (Passing % by wt.) Sieve Sieve Sieve (中田)	% by wt.	~		Liguid	Plasti- city index	Limit city Moisture CBR index Content	#Soaked CBR	Swell	Solf)2.00 mm	200 0.075 mm	(0.075 mm
Environmental Condition		37.5	37.5 19.0 12.5	12.5	9.5	4.75	2.00	4.75 2.00 0.425 0.075	0.075			%	%	%				
Section No. 5	No.	100	86	98	96	8	1 6	7.1	53	54	9	39.49	4	0	MH	<u>e</u>	22	53
Trece Mortirez to	No. 2	00	6	.	82	89	55	42	58	86	12	19.88	<u>6</u>	0	ပ	A 10	য়	28
o in Aiver of	No.	8	98	ଓଡ	86	92	99	6	લ	. 82	O	19.90	۲-	0	၁ Տ	34	33	155
The road run up accross	No.		00	66	6	რ ნ	98	62	12	200	2	34.51	ω	0.26	M	22	۲	۲
grdssy posture land.	-				,		.:	1 21				·				;	· · · · · · · · · · · · · · · · · · ·	

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LEGEND: SM:Slitty sands, slitty gravelly sands
SC:Clayey sands, slayey gravely sands
ML:Slitts, very fine sands, slitty or clayey fine sands
MH:Micacocc slitts, distonaceous slitts, volconic esh
CL:Low plasticity clays, sandy or slitty clays
CH:High plasticity clays, sandy or slitty clays

Natural Water Content
67 blows per each 3 layer

NOTE:

4 days sooking

TRAFFIC COUNT SURVEY RESULT
(12-Hour Traffic Volume : Average of 3-day Counts)
November 1989

SURVEY	DIRECTION	Car/		Pick-up/	DÎ)	D 83		FRUCK		SUB-	Motor	Motor-	Special	TOTAL
STATION		Jeep	deep	Van	Mini	Large	2-azle	3-axle	Trailer	TOTAL	Trycycle	Cycle		1
-	To Jct. Alfonso	7	22	23	9	0	8	0	0	. 55	3	2	0	9
	To Magallanes	10	22	19	0	0	8		0	55	0	8	0	82
7	To Magallanes	6	23	3	ò	0	2	0	0	38	4	S	0	5
() ; ; ; ; ; ;	To Maragondon	60	21	و	0	0	8	0	0	39	eo	u)	0	1 Pr
ന	To Gen. Trias	75	128	102		0	22		0	329		24	2	366
,	To Jct. Mangahan 78	7.8	118	115	~	⊢	14	- ⊶1	0	328	ဇာ	23	erd :	360
ব	To Carmona	341	233	285	56	4	71	30	Ţ	1,021	12	36	2	1,071
	To Jct. Mangahan	362	245	258	8	₹.	6	32	-	1,041	11	8	m	1,089

Survey Station No.	Location	Esperimental Pavement Section No.
	Jct. Alfonso - Magallanes	Section 1
	Magallanes - Maragondon	Section 2
	Gen. Trias - Jct. Mangahan	Section 3 & 4
	Jct. Mangahan - Carmona	Section 5

AVERAGE ANNUAL DAILY TRAFFIC (AADT) OF EXPERIMENTAL PAVEMENT CONSTRUCTION SECTIONS

SURVEY	DIRECTION	Car/	Jeepney	Pick-up/	20	8 ប ន		TRUCK		TOTAL
STATION		Jeep		Van	inim .	Large	2-axle	3-axle	Trailer	
 	To Jct. Alfonso	111	35	35	0	0	9	0	0	87
-	To Magallanes	1.15	35	1 29	0	0	و	2	0	1 87
	Total	1 26	10	64	0	0	12	2	0	174
2	To Magallanes	1 14	36		0	0 -	9	0	0	61
	To Maragondon	14	33	6	0	0	9	0	0	62
	Total	28	69	14	0	0	1.2	0	0	123
8	To Gen. Trias	84	165	114	1	. 0	27	1 2	0	393
	To Jct. Mangahan	1 87	154	128		2	1.7	2	0	391
]]]	Total	171	319	242	2	2	ት	4	0	784
্ব ক	To Carmona	380	303	318	56	9	98	37	2	1,188
	To Jct. Mangahan ! 404	404	319	1 288	50	9	108	39	1 2	1,216
	Total	784	622	909	106	12	194	76	4,	2,404

HOURLY AND SEASONAL FACTORS

режн	Experimental	Factor	Car/Jeep/ Jeepney	Jeepney	3 0 8	2	e i	TRUCKS
STATION	Pavement Section		Pick-up/Van	•	Mini	Large	Mini Large 2-axle Trailer	Trailer
STA. NO. 138		Hourly	 1 1 1 1 1 1 1 1 1 1 1	1 1 1 1 1 1 1 1	; ; ; ; ; ; ;	! ! ! ! ! !	 	
	Sections	Factor	1.2214	1.3216	11.0000	1.0984	1.3216 1.0000 1.0984 1.6939 1.4059	1.4059
Provincial Boundary !	1 and 2	Seasonal						
tay/Li		Factor	1.2317	1.1835	11.7917	1.4055	1.1835 1.7917 1.4055 1.1216 1.0192	1.0192
STA. NO. 136	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	Hourly		1 1 1 1 1		 -		! ! !
	Sections	Factor	1.3233	1.3894	11.0417	1.3736	1.3894 1.0417 1.3736 1.3531 1.6120	1.6120
Provincial Boundary ;	3, 4 and 5	Seasonal						
Binan/Carmona		Factor	0.8426	0.9354	0.9524	11.0633	0.9354 0.9524 1.0633 0.8947 1.1939	1.1939

NOTE: Seasonal Factor is for November. Source: Planning Service, DPWH

AXLE LOAD DISTRIBUTION (Station-1, Truck)
(Jct. Alfonso - Magallanes)

A-1 A	Load	Singl	e Axle	Tander	n Ayla
kips)	(kg)	No.of Axles	18-kip ESALs	No.of Axles	18-kij ESALs
2	.454- 1.361	3	.00		
4 1	.361- 2.268	5	.02	- 1	- ,"
6 2	.268- 3.175	1	.01	and the second of the second	
8 3	.175- 4.082	5	.17	· · · · · · · · · · · · · · · · · · ·	-
	.082 - 4.990	4	.34	_	
12 4	.990- 5.897	. 	<u> </u>		
14 5	.897- 6.804	-	←	-	
16 6	.804- 7.711	·		1	.0
	.711- 8.618	-	-	-	
	.618- 9.525	- :: ,		and the second section of the second	<u></u>
22 9	.525-10.433	1 1	2.44	-	
	.433-11.340	· · · · · ·	. 		m []
	.340-12.247	- '	_	-	
	.247-13.154	·	, a	- :	-
	.154-14.061	-	: <u>→</u> • · · · · · · · · · · · · · · · · · ·		- 1
	.061-14.969	. · · · ·	.		- · · · · -
	.969-15.876	-	-	· • · · ·	3 · ·
	.876-16.783	- ·	, 	•	-
38 16	.783-17.690	· 	- .	- ```	·
40 17	.690-18.597	<i>-</i>	→		
	.597-19.504	<u> </u>		. -	
44 19	.504-20.412			÷ ,	-
46 20	.412-21.319	-	-	<u>-</u>	-
48 21	.319-22.226	-	-	. · · · · · · · · · · · · · · · · · · ·	-,
	.226-23.133	- .	- .	-	_
	.133-24.040	. =			
	.040-24.948	-	-		-
56 24	.948-25.855	-	_	and the second second	-
58 25	.855-26.762	<u>-</u> * .!	-	6	
60 26	.762-27.669	-			- '' _!
62 27	.669-28.576		-		
64 28	.576-29.483		.−		
	.483-30.391	· -	_	-	_
	.391-31.298	→ , ·	-	-	· -
	.298-32.205		. - :		
	.205-33.112	- ',	- / .	-	
	.112-34.019		.		-
	.019-34.927		·	and the second second	- .
	.927-35.834				- :
	.834-36.741	- ,	and the second	-	
	.741-37.648			-	· - _, .
	.648-38.555	- .	-	•	
86 38	.555-39.463	-	-		
88 39	.463-40.370		-	- ,	
	.370-41.277	sante	. : -	<u> </u>	
•	Total	19	2.98	1	.0

Note: Equivalency factor for flexible pavement,pt=2,SN=2

AXLE LOAD DISTRIBUTION (Station-3, Bus)
(Gen. Trias - Jet. Mangahan)

	Axle Load	1 1	Single	Axle		Novemb Tandem	
	part part and this did park are bed that you and him this did the thin him o		No.of	18-kip		No.of	18-kir
(kips			Axles	ESALs	<u>,</u> %	Axles	
2	.454- 1.361		_				_
4	1.361- 2.268		4	.01		_	-
6	2.268- 3.175			_			
8	3.175- 4.082		4	.14			~~
10	4.082- 4.990		D48	-	•	-	
12	4.990- 5.897	F t	'		•	-	· ~-
14	5.897- 6.804	1.				<u></u>	
: 16	6.804- 7.711	*	·				-
18	7.711- 8.618		-	-			_
20	8.618- 9.525		-	_		-	
22	9.525-10.433	Section 1997		-			-
24	10.433-11.340		-	-		-	
26	11.340-12.247			-			_
28 30	12.247-13.154 13.154-14.061	· · · · · · · · · · · · · · · · · · ·		-	•	_	<u></u>
32	14.061-14.969	247	_	_		-	<u>-</u>
34	14.969-15.876		_	_			_
36	15.876-16.783			_		_	_
:38	16.783-17.690		_	ra		_	9-4-
40	17.690-18.597			_		-	. =
42	18.597-19.504		_			· -	
44	19.504-20.412		-	_			-
46	20.412-21.319		_	***		-	_
48	21.319-22.226	•	-	_	+,	-	-
50	22.226-23.133			•••		•••	atow
52	23.133-24.040		••	-	٠,	_	-
54	24.040-24.948	•				415.	-
56	24.948-25.855			-		_	•••
58	25.855-26.762			•••		-	•
60	26.762-27.669		-	-			-
62	27.669-28.576		-	ate .		-	5.0
64	28.576-29.483		_	_	•	-	***
66	29.483-30.391		-	~		-	-
68	30.391-31.298			***		-	-
70	31.298-32.205		-			~	~
72	32.205-33.112		~		٠.		-
74	33.112-34.019		-	P0			•••
76	34.019-34.927			-		***	-
78	34.927-35.834		-			<u>٠</u> ٠	• •••
80	35.834-36.741			_		••	_
82	36.741-37.648	•	_	_			-
84	37.648-38.555					· -	
86	38.555-39.463		-	•••			
88	39.463-40.370			-		- -	
90	40.370-41.277			••• 			
	~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~						

Note: Equivalency factor for flexible pavement, pt=2, SN=2

AXLE LOAD DISTRIBUTION (Station-3, Truck)
(Gen. Trias - Jct. Mangahan)

A	axle Load		Single	Axle	Tande	em Axle
	الدين المراج الم	. 485 842 448 448 848 848 84	No.of		No. o	
(kips)	(kg)		Axles	ESALs	Axles	
2	.454- 1.361		13	.00		***
4	1.361- 2.268		69	.21	<u> </u>	
6	2.268- 3.175		67	.80	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	
8	3.175- 4.082		37	1.29	ere	. –
10	4.082- 4.990		39	3.32	-	
12	4.990- 5.897		23	4.07		· ·
14	5.897- 6.804		10	3.38	3	.09
16	6.804- 7.711		11	6.58	3	.14
18	7.711- 8.618	•	3	3.00	6	. 46
20	8.618- 9.525		2	3.18		
22	9.525-10.433		6	14.64	1	.17
24	10.433-11.340		10	36.20	·	-
26	11.340-12.247		4	20.84		· ~-
28	12.247-13.154		1	7.31	1 · · · · · · · · · · · · · · · · · · ·	. 47
30	13.154-14.061		1	10.00		-
32	14.061-14.969		1	13.50	e e e e e e e e e e e e e e e e e e e	-
34	14.969-15.876		-	-		
36	15.876-16.783		-	-	-	· .
38	16.783-17.690		-	-	. 4	7.00
40	17.690-18.597		-	-	3	6.57
42	18.597-19.504		-	•-	2	5.46
44	19.504-20.412		-	-	→	· -
46	20.412-21.319		-	-	-	
48	21.319-22.226		_	-	1	4.98
50	22.226-23.133		-	-	1	5.99
52	23.133-24.040		-		•	=
54 56	24.040-24.948		-	-		. ***
56 50	24.948-25.855		-	•••	-	_
58 60	25.855-26.762		-			•
60 62	26.762-27.669 27.669-28.576		-		• • • • • • • • • • • • • • • • • • •	
_				- .	.	.
64 66	28.576-29.483 29.483-30.391			-		
68	30.391-31.298		_	_		
70	31.298-32.205		_	_		
72	32.205-33.112		_	_	·	
74	33.112-34.019		_	_	. <u>-</u> .	. –
7 6	34.019-34.927					· <u></u>
78	34.927-35.834		-	_		
80	35.834-36.741					-
82	36.741-37.648				=	
84	37.648-38.555		_	_	, mare	_
86	38.555-39.463					
88	39.463-40.370		-	-		_
90	40.370-41.277			· 		-
	Total		297	128.32	25	31.33

Note: Equivalency factor for flexible pavement, pt=2, SN=2

AXLE LOAD DISTRIBUTION (Station-4, Bus) (Carmona - Jct. Mangahan)

Ax	le Lo	ad					Single	Axle		Tandem	Axle
								18-kip		No.of	
(kips)		(kg)						ESALs		Axles	18-kij ESAL:
2	. 45	 4- 1	.361	.~~~							· · -
4	1.36						5	.02	4.	. <u>.</u>	_
6	2.26					:	36	.43		-	
8	3.17						18	.63			. –
	4.08						22	1.87	+ 4	<u> </u>	٠
12	4.99						9 :	1.59		_	-
14	5.89						<u>-</u>	-	Ņ. A		· <u>-</u>
	6.80					,	_	-		_	,
	7.71						2	2.00			·, 🕳
	8.61						4	6.36			-
	9.52				1		_	-		<u> </u>	
	10.43						1	3.62			
	11.34							-		· _	· <u> </u>
	12.24						Brea .	_			**
	13.15								5	-	_
	14.06						1	13.50		_	· _
	14.96					-	<u>-</u>	-			_
	15.87							_			49
	16.78						_			· ; <u>-</u>	_
	17.69						va.	_		, s -	_
	18.59						_	-	· -	_	_
	19.50						_			_	
	20.41						_	••			_
	21.31						_				-
	22.22						_	_		_	_
	23.13							_			
	24.04							-		-	_
	24.94						_	_			_
	25.85						_	_			_
	26.762						_	_		_	
	27.669							_		_	_
	27.603 28.570						_	-		<u> </u>	_
	29.48;						_	_		_	
	29.40. 30.39						_	_			_
	30.39. 31.298						_	_			
	32.20						_	-	·.		· -
							_			_	
	33.112						~	-		- -	
	34.019						-	••			-
	34.92						-	•		-	-
	35.83						-	-			
	36.74						_	-		_	•-
	37.64						-	-		7	**
	38.55						Bub.	**		-	
	39.46									-	-
90	40.37)-41	.277				-			-	-
~~~~~					~~~						

Note: Equivalency factor for flexible pavement,pt=2,SN=2

AXLE LOAD DISTRIBUTION (Station-4 , Truck) SWIFFEE (ETAILS HERE (Carmona - Jot. Mangahan)

A	rle Load	41.7.4	Single	Axle	Tande	
(kips)	; j.d #25 <b>(kg)</b>	Section of the	No.of		No.of	18-ki
2	.454- 1.361		22	.00		;-
4	1.361- 2.268	• • • • • • • • • • • • • • • • • • • •	88	.26	astria 🗎 💆	. =
6	2.268- 3.175	• :	96	1.15	and the second section of the second	.· <del></del>
- 8	3.175- 4.082	r 3	88	3.08	and the second section of the section of the second section of the section of the second section of the section of th	-
10	4.082- 4.990	* :	77	6.55	************* <b>*</b> ***	-
12	4.990- 5.897	****	36	6.37	10	.10
14	5.897- 6.804		17	5.75	14	. 4
16	6.804- 7.711		10	5.98	8	. 3
18	7.711- 8.618		10	10.00	2	.19
	8.618- 9.525	٠,	5	7.95	3	. 3
22	9.525-10.433		8	19.52	2	
24	10.433-11.340		17	61.54	` <b>1</b>	. 2
26	11.340-12.247	• .	4	20.84		• le:
28	12.247-13.154		1	7.31		
30	13.154-14.061		î	10.00		
32	14.061-14.969		1	13.50		<del>-</del>
	14.969-15.876		1	17.90	<del>-</del>	- <del>-</del>
34			1			-
36	15.876-16.783		_	-	6	8.2
38	16.783-17.690		_	p-1	3	5.2
40	17.690-18.597		ates .	·	3 1	6.5
42	18.597-19.504		-	-	and the second second	i <del></del>
44	19.504-20.412		-	-	2	
46	20.412-21.319		-	•	2	8.2
48	21.319-22.226		_	_	3	11.0
50	22.226-23.133		_	-	1	5.9
52	23.133-24.040		-	-	<del>-</del>	
54	24.040-24.948		-	-	2	17.03
56	24.948-25.855		_		÷ .	_
58	25.855-26.762		_		and the state of t	<del>-</del>
60	26.762~27.669		-	-	2	27.6
62	27.669-28.576		-	-		-
64	28.576-29.483		_	-	in the second of	-
66	29.483-30.391		_	-	e e e e e e e e e e e e e e e e e e e	
68	30.391-31.298			-		. 🕳
70	31.298-32.205		***	. 🕳		
72	32.205-33.112		_		en e	
74	33.112-34.019		_	_	1	36.4
76	34.019-34.927		-	_		50.4
78	34.927-35.834		_	_		
80	35.834-36.741					· <del>-</del>
82	36.741-37.648		_	_		. •••
			_	_	· · · · · · · · · · · · · · · · · · ·	. <del></del>
84	37.648-38.555		-	-	•	
86	38.555-39.463		-	-		· <del></del>
88	39.463-40.370		-	-	- · ·	.=
90	40.370-41.277		-	-	<b>-</b> ·	
	Total		482	197.70	65	_~~~

Note: Equivalency factor for flexible pavement, pt=2, SN=2

#### Appendix - E

### FIELD AND LABORATORY TEST RESULTS

#### MATERIAL TEST RESULTS OF EXPERIMENTAL PAVEMENT CONSTRUCTION

Test Results of Materials used in Section No. 1, 2, 3, and 4

AGGREGATE FOR SUBBASE COURSE USED IN SECTION NO. 1 AND NO. 2 TABLE 1

: River-run Sandy Gravel : Mobato Quarry, Cavite

Materials Source Specification Item 200

AGGREGATE FOR SUBBASE COURSE USED IN SECTION NO. 3 AND NO. 4

TABLE 2

: River-run Sandy Gravel : Mamba Quarry, Cavite Mamba River

Materials Source

612 612 650

Test Items	Test	Test Results	Specification Item 200	Test Items	Test	Test Results
Sieve Analysis (% Passing) Sieve Size		 		Sieve Analysis (% Passing)	;	)    -  -  -  -
50.0 mm	ф	100	100	50.0	œ	100
25.0 mm	æ	69	55 - 85	25.0 mm	æ	69
9.5 mm	æ	70	40 - 75	mm 5.6	оP	58
0.075 mm	óp	7	0 - 12	0.075 mm	ф	σ,
Liquid Limit		Ω, Z	35	Liquid Limit		5
Plasticity Index		ď	<12	Plasticity Index	-	ហ
Abrasion Loss	æ	43	×50	Abrasion Loss	ф	41
Moisture Density Relation (AASHTO T-180 C)			ļ	Moisture Density Relation		
Maximum Dry Density Optimum Moisture	Kg/m ³	1,940		Maximum Dry Density Optimum Moisture	Kg/m3	1,963
Content	æ	16.6		Content	æ	10.
California Bearing Ratio (At MDD)	dp	50	>25	California Bearing Ratio	o ap	53
Swell	æ	0		Swell	ф	0.87

**×25** 

0.87

AGGREGATE FOR BASE COURSE USED IN SECTION NO. 1 TABLE 3

	ueso	IN SECT	USED IN SECTION NO. 1		SECTION	SECTION NO. 2, NO. 3 AND NO. 4	. 3 AND NO.	4
Materials : C. Source : Un	Crushed Stone Unirock Quarry	re rry, Antig	Crushed Stone Unirock Quarry, Antipolo, Rizal		Materials : Crushed Stone Source : Unirock Quarr	Crushed Stone Unirock Quarry, Antipolo, Rizal	olo, Rizal	
Test Items		Test	Test Results	Specification Item 202	Test Items	Test	Results	Specification Item 202
Sieve Analysis (% Passing)	Passing)				Sieve Analysis (% Passing)	:   :   :   :   :   :   :   :	1	
Sieve Size					Sieve Size			
3.7.5 mm		ф	100	1,00	37.5 mm	de	100	100
25.0 mm		æ	1		25.0 mm	,eo	8	
19.0 mm		æ	79	60 - 85	19,0 mm	ġρ	71	60 - 85
mm 2.9		ф	1	,	9.5 mm	æ	15	•
4.75 mm		ъP	55	30 - 55	4.75 mm	æ	œ	30 - 55
0.425 mm		ðР	13	8 - 25	0.425 mm	фp	ć.	8 - 25
0.075 mm		Ф	in.	2 - 14	0.075 mm	æ	10	2 - 14
								-
Liguid Limit			άŅ	4.25	Liquid Limit		23	<25
Plasticity Index			NP	9 >	Plasticity Index		ক	9
Abrasion Loss		ф	ı	< 45	Abrasion Loss	æ	35	<45
Moisture Density Relation	elation			:	Moisture Density Relation		:	
(AASHTO T-180 C)		•			(AASHTO T-180 C)	(		
Maximum Dry Density	sity	Kg/m³	1,940		Maximum Dry Density	Kg/m ³	2,277	
Optimum Moisture	•				Optimum Moisture			
Content		ф	12.0		Content	de	5.8	
California Bearing Ratio	Ratio	æ		>80	California Bearing Ratio	æ	117	>80
(At MDD)					(At MDD)			
Swell		de	,		Swell	de	60-0	

Remarks: Sample meets Specification Requirements.

Remarks: Abrasion Loss and CBR were not tested.

TABLE S AGGREGATE FOR AGGREGATE SURFACE COURSE

AGGREGATE FOR AGGREGATE SURFACE COURSE USED IN SECTION NO. 1

: Blended Crushed Stone : Unirock quarry, Antipolo, Rizal

rable 6	••
TAE	Materials Source
COURS	
AGGREGATE FOR AGGREGATE SURFACE COURSE USED IN SECTION NO. 1	w
REGATE O. 1	Blended Crushed Stone Urto Interprizes, Batangus
FOR AGG CTION N	shed St rizes,
EGATE 1	Blended Crushed Stone Urto Interprizes, Batan
AGGE	: Blend : Urto
TABLE S	κί
	Materials Source

Specification

Specification Item 300

Test Results

Grading A

55 - 85 25 - 65 25 - 50 15 - 30 5 - 20

435

Test Items	Test Results	Ø	Test Items
Sieve Analysis (% Passing)	\$ \$ 1	Grading A	Sieve Analysis (% Passing)
Sieve Size			Sieve Size
50.0 mm	se 100	100	50.0 mm
mm 5.6	89	55 - 85	mm 5.6
4.75 mm	8 52	25 = 65	4.75 mm
2.00 mm	8 38	25 - 50	2.00 mm
0.425 mm	8 18	15 - 30	0.425 mm
0.075 mm	\$ 10	5 - 20	0,075 mm
•			Liquid Limit
Liguid Limit	14	<35	Plasticity Index
Plasticity Index	7	. 4	Abrasion Loss
Abrasion Loss	osp.	A. C.	Moisture Density Relation
Moisture Density Relation			(AASHTO T-180°C)
(AASHIO I-180°C)	ı		Maximum Dry Density
Maximum Dry Density	kg/cm ³ 1,920		Optimum Moisture Content
Optimum Moisture Content	\$ 14.3	m	
		1	

meets Specification Requirements.

kg/cm³ 2,360

Remarks: Sample meets Specification Requirements. Abrasion Loss was not tested.

TABLE 7 AGGREGATE FOR BMP

TABLE 8 AGGREGATE FOR BST AND BMP

: Crushed Stone 3/4" : Angono, Rizal

Materials Source

: Crushed Stone 1-1/2" : Angono, Rizal Materials Source

Test Items	Test Results	s Specification Item 305	Test Items	Test Results	Specification its BST BMP	tion BMP
Sieve Analysis (% Passing)	# # # # # # # # # # # # # # # # # # #	1 f 2 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1		1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 -		
Sieve Size			Sieve Analysis (% Passing)		Grading A C	υ
63.0 mm	* 100		Sieve Size			
50.0 mm	8 100	100	25.0 mm	96	100	100
37.5 mm	- C-	35	19.0 mm	ф	- 06	90 - 100
25.0 mm	8	2 T O	12.5 mm	æ	54 20 -	20 - 55
19.0 mm	es es	1	мш 5.6	φP	12 0 -	0 - 15
12.5 mm	dP	ss 1 0	4.75 mm	de de	- 0	'n
mm 2.6	ap		2.36 mm	dР	•	
4.75 mm	dю	ı		٠		
			Bulk Specific Gravity (SSD)		2.80	
Bulk Specific Gravity (SSD)	¢ķo	2.80	Absorption	ф	0.8	
Absorption	ďφ	0.80	Abrasion Loss	æ	20 <40	O
Abrasion Loss	÷-	3 <40		11111111111		1

Remarks: Sample meets Specification Requirements.

TABLE 9 AGGREGATE FOR BST AND DBST

TABLE 10 AGGREGATE FOR BITUMINOUS SEAL COAT

: Crushed Sand : Angono, Rizal

Materials Source

•					
				-	
Materials	•	Crushed	000	3/80	
	•		)	)	
Source	••	Andono,	Rizal		

Test Items	Test Results	Specification BST BMP	Test Items	Test Results	sults Sp
	; ; ; ; ; ; ; ; ; ; ; ; ; ; ; ; ; ; ;	rtem 304 305		1 5 1 1 1	1
Sieve Analysis (% Passing)		Grading B D	Sieve Size		
Sieve Size			THE 5.6	dΡ	100
12.5 mm	100	100	4.75 mm	مين	26
mm 5.6	60 60	85 - 100	2.36 мм	æ	. 02
4.75 mm	8 19	10 - 30	1.18 mm	æ	43
2.36 mm	m æ	0 - 10	0°300 mm	ďΡ	ω
1.18 mm	49	ທ - 0	0.150 gm	dФ	m
0.30 mm	l es				
			Bulk Specific Gravity (SSD)	\$	2.75
Bulk Specific Gravity (SSD)	2.7	· ·	Absorption	ď	1,48
Absorption	3.40			1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	
Abrasion Loss	8 22	<40	Remarks: Sample meets Specification Requirements.	ication Re	quirements.

Specification Item 303

100

0 - 10

Remarks: Sample meets Specification Requirements.

TABLE 11 EMULSIFIED ASPHALT

Materials	••	Cationic Emul	Cationic Emulsified Asphalt CSS-1h	
Source	••	Rigid Sales Corporation	Corporation	
Proposed Use	••	Frime Coat, 9	Prime Coat, Seal Coat, BST and BMP	•

Test Items	Test	Test Results	Specification AASHTO M-208	ion 38
Viscosity	 	! ! ! ! ! ! !	† † † † † † † † † † † † † † † † † † † †	! 
(Saybolt furol) 25°C	ຜ	27	20 - 100	
Stability	фP	0.1	1.0	max
Cement mixing	øP	2.0	2.0	max
Sieve test	dP	0.1	0.1	RAX
Residue by distillation	æ		57	min
Residue				
Penetration, 25°C, 100g, 5 sec	U	90	40 - 90	
Ductility 25°C	Ę	100	40	min
Solubility in tricloethlene	æ	286	97.5 min	T T
Specific Gravity 25°C/25°C		101		

Remarks: Sample meets Specification Requirements.

# TABLE 12 ASPHALT CEMENT

Materials Source Proposed Use	: Straight Asphalt 60 - 70 : Petrophil Corporation : Asphalt Concrete Mixture	ilt 60 - coration ste Mixt	70 ure	
Test Items		Test Res	Test Results	Specification AASHTO M226
Penetration at 25°C, 100 g 5 sec	25°C, 100 g	: : :	65	60 - 70
Flush Point COP	Ωι	ပ	333	232 min
Ductility 25°C		8	118	100 min
Loss of heating	ָּטָי	di?	0.3	0.5 max
Solubility in	Solubility in trichloethylene	æ	99°.5	99.0 min
Residue	Sidue Donotrotion & of original	ŧi		\$ \$ \$ U
Ductility 25	Ductility 25 cm/min	e E	100	nim ec
Specific Gravity 25°C/25°C	ty 25°C/25°C		Negative 1.01	Negative

Remarks: Sample meets Specification Reguirements.

TABLE 13 ASPHALT CONCRETE MIXTURE DESIGN

Aggregate Blending Proportion

Materials	Material Source	Production by Wt. Percent	
3/4" Crushed Stone	Golden Mills	10%	2.80
3/8" Crushed Stone		358	2.83
Of the contract of the contrac	•	40%	2.58
Creament China	Bulcan	3.5%	2.31
		100%	2.657

(d1) yrillidase Haderald 8 8 5 6 8

2002

2.33 ₽

2 32

Density (gr/cd)

999 . 150

2.31

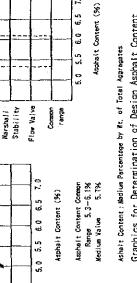
238

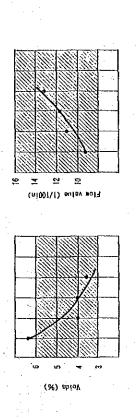
Blended Aggregate Gradation (Passing Sieve by Wt. Percent)

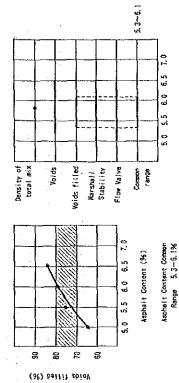
Sieve		Grading	Specification Item 310, Type F
19	mm	100	
12.5	mm	94	1
5	THE COLUMN	91	
4.75	נונעו	63	45 - 65
2,36	THE THE	48	33 - 53
. 18	m m	33	1
0.300	mm.	11	10 - 20
0.075		ហ	80 I EI

Marshall Test Properties of Mixture at Optimum Asphalt Content of 5.7% by Wt. of Total Mix

		ובאר עבסתונא	นาน	Min Max
Density	qr/cm ³	2.32		
Stability	qt	1,920	1,200	ŧ
30.	0.01 in	11.8	∞	16
	- exe	4.2	m	G
Void Filled	, sp	73	70	80







Graphics for Determination of Design Asphalt Content

Table No. 14 to Table No. 27 Test Results of Materials used in Section No. 5

TABLE 14 AGGREGATE FOR SUBBASE COURSE

TABLE 15 AGGREGATE FOR SUBBASE COURSE

: Blended Crushed Aggregate : Unirock Quarry, Antipolo, Rizal

Materials Source

: Blended Aggregates of Crushed Stone/Sand/Soil : Angono, Quarry and Trece Martrez Quarry

Materials Source

Sieve Analysis (% Passing)         Sieve Analysis (% Passing)         Sieve Analysis (% Passing)         Grading A Sieve Size         California Bearing Ration         Sieve Analysis (% Passing)         Grading A Sieve Size         100         100         37.5 mm         % 100         100         37.5 mm         % 100         100         100         35.5 mm         % 100         100         100         35.5 mm         % 100         100         100         35.5 mm         % 100         100         100         100         100         100         100         100         100         100         100         100         100         100         100         100         100         100         100         100         100         100         100         100         100         100         100         100         100         100         100         100         100         100         100         100         100         100         100         100         100         100         100         100         100         100         100         100         100         100         100         100         100         100         100         100         100         100         100         100         100         100         100         <	Test Items Test Results	Test Results	Specification Item 200	Test Items	Test Results		Specification Item 200
\$ 100 100 37.2e	Sieve Analysis (% Passing)		}	Sieve Analysis (& Passing)		Gre	ding A
# 100	Steve Size			Sieve Size			
\$ 85 55 - 85 19.0 mm \$ 8 85 87 88 88 88 88 88 88 88 88 88 88 88 88		9 100	100		æ	ō	100
# 46 40 - 75		8 85	55 - 85	25.0 mm	de	92	,
# 9 0 - 12		8 46	40 - 75	_	**	.1	- 85
# 4.75 mm # 4.75 mm # 4.7 30  9.425 mm # 4.7 30  1.2 <12 0.0425 mm # 4.7 30  1.2 <12 0.075 mm # 11 2  8 1.1	0.075 mm	ģ	0 - 12		de de	63	,
32					B	:	. 55
12	Liguid Limit	32	<35	0.425 mm	œ	80	3 - 25
# 42 50 Liquid Limit Plasticity Index  Kg/m³ 1,980  # 8.9  Moisture Density Relation Moisture Density Relation  # 8.9  Maximum Dry Density  Coptimum Moisture  California Bearing Ratio  # 46	Plasticity Index	12	<12	0.075 mm	œ		14
Liquid Limit  Plasticity Index  Rg/m³ 1,980  Rbrasion Loss  Moisture Density Relation  Ray  Ray  Ray  Maximum Dry Density  Coptimum Moisture  California Bearing Ratio  Ray  Ray  Ray  Ray  Ray  Ray  Ray  Ra	Abrasion Loss	8 42	50				
Kg/m ³ 1,980  Relaticity Index  Relation  Rel	Moisture Density Relation			Liquid Limit		25	<b>&lt;25</b>
Kg/m³       1,980       Abrasion Loss       \$ 28         Moisture Density Relation       (AASHTO T-180 C)       (AASHTO T-180 C)         %       27       >25       Maximum Dry Density       Kg/m³       2,110         Optimum Moisture       Content       \$ 3.4         Pecification Requirements       California Bearing Ratio       \$ 46	(AASHTO T-180 C)			Plasticity Index		. 9	9
% 8.9 (AASHTO T-180 C) % 27 >25 Maximum Dry Density Kg/m ³ 2,110 Optimum Moisture % 8.4 California Bearing Ratio % 46	Maximum Dry Density			Abrasion Loss	do	88	<45
# 8.9 (AASHTO T-180 C)  # 27 >25 Maximum Dry Density Kg/m ³ 2,110 Optimum Moisture Content Content Requirements.  California Bearing Ratio # 46	Optimum Moisture		. *	Moisture Density Relation			
\$ 27 >>25 Maximum Dry Density Kg/m ³ 2,110 Optimum Moisture	Content	60		(AASHIO I-180 C)			:
Content 8 8.4 ication Requirements. 8 46	California Bearing Ratio	8 27	>25	Maximum Dry Density		0	
California Bearing Ratio 8 46				Content	æ	8.4	
	Remarks: Sample meets Spec:	ification Require	ments.	California Bearing Ratio	eP :	16	08<

. 1

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Swell

TABLE 16 EMULSIFIED ASPHALT

: Emulsified Asphalt SS-1 : Petrophil Corporation : Prime Coat Source Proposed Use Materials

Test Items	Test	Test Results	Specification AASHTO M-140	ፔ
Viscosity				Penetra
(Saybolt furol) 25°C	v	25	20 - 100	S
Stability	ф	9.0	1.0 max	Flush P
Cement mixing	фP	1.7	2.0 HUX	
Sieve test	æ	0.05	0.1 max	Ductili
Residue by distillation	φp	60.5	57 min	Loss of
Residue				Solubil
Penetration, 25°C, 100g, 5 sec		110	100 - 200	
Ductility 25°C	Ë	115	40 min	Residue
Solubility in tricloethlene		99.2	97.5 min	Penet
Specific Gravity 25°C/25°C		1.02		Ducti

Remarks: Sample meets Specification Reguirements.

TABLE 17 ASPHALT CEMENT

: Straight Asphalt 60 - 70 : Petrophil Corporation : Asphalt Concrete Mixture Materials Source Proposed Use

Test Items	Test	i V3	Specification AASHTO M226
Penetration at 25°C, 100 g			
S sec		64	60 - 70
Flush Point COP	ပ္ပ	338	232 min
Ductility 25°C	E S	>120	100 min
Loss of heating	do	0.02	0.5 max
Solubility in trichloethylene	æ	6*66	99.0 min
Residue			
Penetration % of original	æ	. 99	54 min
Ductility 25 cm/min	Ë	>100	50 min
Spot Test		Negative	Negative
Specific Gravity 25°C/25°C		,	

Remarks: Sample meets Specification Requirements.

COARSE AGGREGATE FOR ASPHALT CONCRETE TABLE 18

TABLE 19 COARSE AGGREGATE FOR ASPHALT CONCRETE

3/8" Crushed Aggregate Monterock, San Mateo, Rizal	Test Results		4	) M		m	9	2.81	19 1 2 1 3 1 3 4 1 1 2 1 2 1 3 1 3 1 3 1 3 1 3 1 3 1 3 1			kg/m ³ 1.32	kg/m ³ 1.46
Materials : 3/8" Crushed Source : Monterock, Sa	Test Items	Sieve Analysis (% Passing)	Sieve Size		4.75 mm	2.36 mm	0.075 mm	Bulk Specific Gravity (SSD)	Absorption	Abrasion Loss	Dry Unit Weight	Loose	Roded
	Its		100	40	35	7	0	2.81	8 1.13	25		g/m² 1.32	kg/m ³ 1.44
: 3/4" Crushed Aggregate : Monterock, San Mateo, Rizal	est Items Test Results		eX	o eko	ЧĐ	æ						×	

TABLE 20 FINE AGGREGATE FOR ASPHALT CONCRETE

TABLE 21 MINERAL FILLER FOR ASPHALT CONCRETE

Sieve Analysis (* Passing) Sieve Analysis (* Passing) Sieve Size 9.5 mm 4.75 mm 1.18 mm 8 55 0.300 mm 8 55 0.075 mm 8 2 Absorption 8 3.63			
100 99 99 13 13 2.86 3.63	Test Items Test R	Test Results	Specification
100 99 99 13 13 2,86 3,63			* CO / WIND H
mm 8 55 mm 8 13 mm 8 2 ic Gravity (SSD) 8 3.63	Sieve Analysis (% Passing)		-
mm 8 55 mm 8 13 mm 8 2 ic Gravity (SSD) 8 3.63	Sieve Size	:	
nn 8 55 13 13 14 13 15 Gravity (SSD) 8 3.63	0.600 aum	100	100
mm	0.300 mm	80	95 - 85
mm & 2 ic Gravity (SSD) 8 3.63	0.075 mm 8	85	70 - 100
ic Gravity (SSD) 2.86			
ic Gravity (SSD) 2.86 3.63	Calcium Oxide & Magnesium Oxide		-
3.63	(Non-Volatile Basis)	99	60 min
+45.5			
THE THIN THE	Remarks: Sample meets Grading Requirements of Specification.	ements of	Specification.
thoose was kq/m³ 1.53			
Roded kg/m³ 1.63			

ASPHALT CONCRETE MIXTURE DESIGN TABLE 22

2900 2800 2700 2600

(d1) grillides? Hedereil

7 48

Aggregate Blending Proportion

Materials	Material Source	Blending Proportion by Wt. Percent
3/4" Crushed Stone	Monterock, San Mateo, Rizal 14 %	14.8
1/2" Crushed Stone	E	20 %
3/8" Crushed Stone	¥	21 %
Manufactured Sand	. =	44 %
Hydrated Lime	Guanzon Lime, Lucena, Quezon	<b>~~</b> ⊗¢
Total		100 %

2300

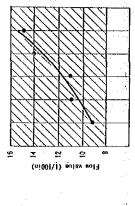
Blended Aggregate Gradation (Passing Sieve by Wt. Percent)

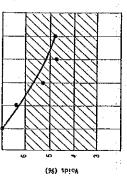
Sieve	Grading %	Specification Item 310, Type F
19 mm	100	100
12,5 mm	96	e e e e e e e e e e e e e e e e e e e
9.5	84	4
10	ស្ត	45 - 65
2.36 mm	43	33 53
1.18 mm	35	
0.300 mm	2.5	10 - 20
0.075 mm	LY)	3 8

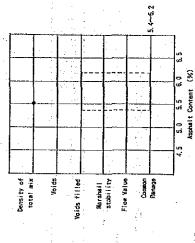
Marshall Test Properties of Mixture at Optimum Asphalt Content of 5.8% by Wt. of Total Aggregates

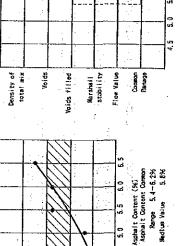
Test Items		Test Results	Specif	Specification Min Max
Density	ity gr/cm ³	2.45	) 	
Stability	q	2,756	1,200	1
Flow	0.01 in	13	60	16
Void	æ	5.3	<b>m</b>	φ
Void Filled	dР	7.1	70	80

Remarks: Test Results meet Specification Requirements.









8

Woids filled (%)

8

Ashair Content: Medium Porcentage by Wr. of Total Agaregates Graphics for Determination of Design Content

TABLE 23 JOB-MIX FORMULA

Mix Proportion

Materials	BY	wt. of	Aggre	By Wt. of Aggregate	ρχ	٦. ٥	i io	ta1	Mix
3/4" Crushed Stone	!	14	! ! ! o⊅ ! !	] { } ! ! ! ! ! ! ! !	t	13.23 %	233	i i de i	
1/2" Crushed Stone	1	20	æ		,-	18.90	06	ЭÞР	
3/8" Crushed Stone		23	dР			19,85	85	æ	
Manufactured Sand		44	ф		• .	41.59	69	ďP	
Hydrated Lime		<b>-</b>	æ			0	0.95	æ	
Asphalt Cement 60/70	_	'n	5.80 %			'n	5.48	ф	
				Total		100		æ>	

Job-mix Formula

1. Aggregate Grading:

Sieve		Design Grading % Passing	Tolerance %	erance	Spec.
19	THE T	100	0	! ! ! !	100
12.5	mir.	96	ı	t	1
S	H	84	1	ı	, I
4.75	mu	55	4	48 - 62	45 - 65
2,36		43	4.	39 - 47	33 - 53
8		35	, '		1
0.300	E	15	4	11 1 20	10 - 20
0.075	mm	ιΩ	2	3 - 7	ب ا 0

2. Asphalt Content:

	Design Asphalt Content &	Tolerance	Design Asphalt Tolerance Job-mix Tolerance Content &
& by Wt. of Aggregate		+0.4	5.4 - 6.2
% by Wt. of Total Mix	iù ru	+0+1	5.1 I D.O

3. Mixing Temperature: Temperature at Tolerance Job-mix Mix Design Test Tolerance 139°C 129 - 149°C 129 - 149°C

TABLE 24 PORTLAND CEMENT

TABLE 25 FINE AGGREGATE FOR PCC

: Sand : Porac, Pampanga

Materials Source

,		
	zal	5
	F.	1
	Antipolo, Rizal	
Portland Cement (Type-1)	Island Cement Corporation,	Portland Cement Concrete
rt1	lan	it T
o Pu	H	2 Po
••	••	•••
10		l Use
Materials	Source	Proposed

	Test	Test Results	Specification			}	Item 311
			ASSETUTIONS	Sieve Analysis (% Passing)		1	
Inchese: Residue on No. 200. steve	e40	89		Sieve Size 9.5 mm	e <b>i</b> r	100	100
Blain specific surface	m ² /kg	280		4.75 mm	خبي د	76	95 - 100
•		:		2.36 mm	æ	80	•
Specific Gravity 3:15	•	٠		1.18 mm	de	58	45 - 80
Normal consistency	dР	25.8		0.500 mm	æ	35	•
1.3				0.300 mm	θP	13	5 - 30
Soundness:				0.150 mm	d₽	4	0 - 10
Autoclave expansion	эp	ı	0.8 max	0.075 mm	ф	7	t
Boil Test	-	Satisfactory	ory			,	
T .				Fines Modules		3.13	
Time of setting:			• • • • • • • • • • • • • • • • • • • •	Bulk Specific Gravity (SSD)		2.58	
Initial set, minutes		132	60 min	Absorption	dФ	1,30	
Final set, hours	:	0.4	10 max	Dry Unit Weight	,		
				Lose	•	1,513	
Compressive strength				Roded	kg/m ³ 1	009	
1 day	DSJ	1			į	* 6 1 1 1 2 2 2 2 3 3	11 11 11 11 11 11 11 11 11
3 davs	psi	1,920	1,800 min	Remarks: Sample meets Specification Requirements	fication Re	aduirement	υ,
7 days	isa	2,880	2,800 min				
28 days	, isc	4,020	4,000 min				
Chemical analysis							
Loss on ignition	æ	2.6	3:0 max	-			
Insoluble residue	æ	0.59	.0.75 max			٠	
Suifur trioxide (SO ₂ )	ďР	2.1	3.0 max				
Magnesium oxide (MgO)	dP	3.5	5.0 max	-			

Remarks: Sample meets Specification Requirements.

cks: Sample meets Specification Requirements.

TABLE 26 COARSE AGGREGATE FOR PCC

TABLE 27 PCC MIXTURES PROPERTIES

Test Items Test Results Specification Course Aggregate 125.7 kg Fine Aggregate 125.7 kg Fine Aggregate 125.7 kg Fine Aggregate 126.6 kg Sieve Size 100 95 - 100 95 - 100 95 - 100 95 - 100 95 - 100 95 - 100 95 - 100 95 - 100 95 - 100 95 - 100 95 - 100 95 - 100 95 - 100 95 - 100 95 - 100 95 - 100 95 - 100 95 - 100 95 - 100 95 - 100 95 - 100 95 - 100 95 - 100 95 - 100 95 - 100 95 - 100 95 - 100 95 - 100 95 - 100 95 - 100 95 - 100 95 - 100 95 - 100 95 - 100 95 - 100 95 - 100 95 - 100 95 - 100 95 - 100 95 - 100 95 - 100 95 - 100 95 - 100 95 - 100 95 - 100 95 - 100 95 - 100 95 - 100 95 - 100 95 - 100 95 - 100 95 - 100 95 - 100 95 - 100 95 - 100 95 - 100 95 - 100 95 - 100 95 - 100 95 - 100 95 - 100 95 - 100 95 - 100 95 - 100 95 - 100 95 - 100 95 - 100 95 - 100 95 - 100 95 - 100 95 - 100 95 - 100 95 - 100 95 - 100 95 - 100 95 - 100 95 - 100 95 - 100 95 - 100 95 - 100 95 - 100 95 - 100 95 - 100 95 - 100 95 - 100 95 - 100 95 - 100 95 - 100 95 - 100 95 - 100 95 - 100 95 - 100 95 - 100 95 - 100 95 - 100 95 - 100 95 - 100 95 - 100 95 - 100 95 - 100 95 - 100 95 - 100 95 - 100 95 - 100 95 - 100 95 - 100 95 - 100 95 - 100 95 - 100 95 - 100 95 - 100 95 - 100 95 - 100 95 - 100 95 - 100 95 - 100 95 - 100 95 - 100 95 - 100 95 - 100 95 - 100 95 - 100 95 - 100 95 - 100 95 - 100 95 - 100 95 - 100 95 - 100 95 - 100 95 - 100 95 - 100 95 - 100 95 - 100 95 - 100 95 - 100 95 - 100 95 - 100 95 - 100 95 - 100 95 - 100 95 - 100 95 - 100 95 - 100 95 - 100 95 - 100 95 - 100 95 - 100 95 - 100 95 - 100 95 - 100 95 - 100 95 - 100 95 - 100 95 - 100 95 - 100 95 - 100 95 - 100 95 - 100 95 - 100 95 - 100 95 - 100 95 - 100 95 - 100 95 - 100 95 - 100 95 - 100 95 - 100 95 - 100 95 - 100 95 - 100 95 - 100 95 - 100 95 - 100 95 - 100 95 - 100 95 - 100 95 - 100 95 - 100 95 - 100 95 - 100 95 - 100 95 - 100 95 - 100 95 - 100 95 - 100 95 - 100 95 - 100 95 - 100 95 - 100 95 - 100 95 - 100 95 - 100 95 - 100 95 - 100 95 - 100 95 - 100 95 - 100 95 - 100 95 - 100 95 - 100 95 - 100 95 - 100 95 - 100 95 - 100 95 - 100 95 - 100 95 - 100 95 - 100 95 - 100 95 - 100 95 -	Test Results Specification Test Results Specification Test Results Specification Fine Fine 100 95 - 100 95 - 100 B. Prop 8 70 35 - 70 3 8 51 - 5 10 8 9 8 9 10 8 9 10 9 10 9 10 9 10 9 1	Materials :	: Blended Crushed Aggregate : Marocco, Antipolo, Rizal	sed Aggre ipolo, Ri	gates		Α.	!			ì
## 100 95 - 100 B. Properties of Mixture  # 100 95 - 100 B. Properties of Mixture  # 100 95 - 100 B. Properties of Mixture  1. Cement Factor  2. Water Cement Ratio  3. Slump  4 1 0 - 5 3. Slump  4 26 4 0 - 5 4 Flexural Strength at 28 days  100 2.77	# 100 95 - 100 B. Prop # 100 95 - 100 B. Prop # 51 10 35 - 70 2. # 27 10 - 30 4. # 26 4 0 - 5 4. # 26 6.4 kg/m³ 1,585 kg/m³ 1,786	Test Items		Test	Results	Specification Item 311		Coarse Aggregate Fine Aggregate		25.7 kg 74.0 kg	
# 100 95 - 100 B. Properties of Mixture  # 70 35 - 70 2. Water Cement Ratio  # 27 10 - 30 3. Slump  # 8 4 0 - 5 7. The triangth at 28 days  # 26 2.77  # 26 2.44  # 4 654  # 558  kg/m³ 1,585  kg/m³ 1,786	# 100 95 - 100 B. Program 100 95 - 100 B. Program 100 95 - 100 95 - 100 95 - 100 95 - 100 95 - 100 95 - 100 95 - 100 95 - 100 95 - 100 95 - 100 95 - 100 95 - 100 95 - 100 95 - 100 95 - 100 95 - 100 95 - 100 95 - 100 95 - 100 95 - 100 95 - 100 95 - 100 95 - 100 95 - 100 95 - 100 95 - 100 95 - 100 95 - 100 95 - 100 95 - 100 95 - 100 95 - 100 95 - 100 95 - 100 95 - 100 95 - 100 95 - 100 95 - 100 95 - 100 95 - 100 95 - 100 95 - 100 95 - 100 95 - 100 95 - 100 95 - 100 95 - 100 95 - 100 95 - 100 95 - 100 95 - 100 95 - 100 95 - 100 95 - 100 95 - 100 95 - 100 95 - 100 95 - 100 95 - 100 95 - 100 95 - 100 95 - 100 95 - 100 95 - 100 95 - 100 95 - 100 95 - 100 95 - 100 95 - 100 95 - 100 95 - 100 95 - 100 95 - 100 95 - 100 95 - 100 95 - 100 95 - 100 95 - 100 95 - 100 95 - 100 95 - 100 95 - 100 95 - 100 95 - 100 95 - 100 95 - 100 95 - 100 95 - 100 95 - 100 95 - 100 95 - 100 95 - 100 95 - 100 95 - 100 95 - 100 95 - 100 95 - 100 95 - 100 95 - 100 95 - 100 95 - 100 95 - 100 95 - 100 95 - 100 95 - 100 95 - 100 95 - 100 95 - 100 95 - 100 95 - 100 95 - 100 95 - 100 95 - 100 95 - 100 95 - 100 95 - 100 95 - 100 95 - 100 95 - 100 95 - 100 95 - 100 95 - 100 95 - 100 95 - 100 95 - 100 95 - 100 95 - 100 95 - 100 95 - 100 95 - 100 95 - 100 95 - 100 95 - 100 95 - 100 95 - 100 95 - 100 95 - 100 95 - 100 95 - 100 95 - 100 95 - 100 95 - 100 95 - 100 95 - 100 95 - 100 95 - 100 95 - 100 95 - 100 95 - 100 95 - 100 95 - 100 95 - 100 95 - 100 95 - 100 95 - 100 95 - 100 95 - 100 95 - 100 95 - 100 95 - 100 95 - 100 95 - 100 95 - 100 95 - 100 95 - 100 95 - 100 95 - 100 95 - 100 95 - 100 95 - 100 95 - 100 95 - 100 95 - 100 95 - 100 95 - 100 95 - 100 95 - 100 95 - 100 95 - 100 95 - 100 95 - 100 95 - 100 95 - 100 95 - 100 95 - 100 95 - 100 95 - 100 95 - 100 95 - 100 95 - 100 95 - 100 95 - 100 95 - 100 95 - 100 95 - 100 95 - 100 95 - 100 95 - 100 95 - 100 95 - 100 95 - 100 95 - 100 95 - 100 95 - 100 95 - 100 95 - 100 95 - 100 95 - 100 95 - 100 95 - 100 95 - 100 95 - 100 95 - 100 95 - 100 95 - 100 95 - 100 95 - 100 95 - 100 95 - 100 95 - 100 95 - 100 95	Sieve Analysis (4	& Passing)	• • • • • • • • • • • • • • • • • • •	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	Grading C	-	water		18.6 Kg	
# 100	n	Sieve Size 50.0 mm		He	100	95 - 100	Б.	Properties of Mixture			
# 70 35 - 70 1. Cement Factor  # 51 - 2. Water Cement Ratio  # 27 10 - 30 3. Slump  # 4 0 - 5 4. Flexural Strength at 28 days  # 70 3 - 5 7. Test No. Strength  # 26 558    kg/m ³ 1,585   kg/m ³ 1,786   558    Kg/m ³ 1,786   558	an 8 70 35 - 70 2.  a 8 51 - 2.  a 8 27 10 - 30 3.  a 8 4 0 - 5  a Gravity (SSD) 8 26  bt kg/m³ 1,585  kg/m³ 1,786			ф	100	ı				r	
# 51 - 2. Water Cement Ratio  # 27 10 - 30	an 8 51 - 2.  a 8 27 10 - 30 3.  a 8 4 0 - 5  a Gravity (SSD) 8 26  bt kg/m ³ 1,585  kg/m ³ 1,786			ъ	70			1. Cement Factor		9.5 bags/m ³	
# 27 10 - 30 3. Slump  # 18	an 8 27 10 - 30 3.  an 8 18 - 5  an 9 4 0 - 5  an 9 0.3 - 5  Gravity (SSD) 8 26  bt kg/m³ 1,585  kg/m³ 1,786	0.61		æ	51	1		<ol><li>Water Cement Ratio</li></ol>		0.64	
# 18 - 4. Flexural Strength at 28 d # 4 0 - 5  Test No.  Gravity (SSD) # 26  ht kg/m ³ 1,585  kg/m ³ 1,786	n 8 18 - 5 n 8 4 0 - 5 Gravity (SSD) 8 2.77 2.77 8 1,585 ht kg/m ³ 1,585 kg/m ³ 1,786			· ex	27	1		3. Slump		2.5 - 3 in.	
Test No.  Gravity (SSD)  Respectively (SSD)  R	Gravity (SSD) 8 2.77 2.77 8 1,585 kg/m ³ 1,786			o de	18	1		4. Flexural Strength at 20	8 days		
m	m Gravity (SSD) 8 2.77 8 26 8 26 ht kg/m ³ 1,585 kg/m ³ 1,786			ď	47	ر ا ا					
Gravity (SSD)  * 26  * 26  ht kg/m³ 1,585  kg/m³ 1,786  8	Gravity (SSD) 8 8 ht kg/m ³ kg/m ³	0.075 mm		o)PI	0.3	ŧ		Test No.	Strength 600	(bsi)	
Gravity (SSD)  % 26  ht kg/m ³ 1,585  kg/m ³ 1,786	Gravity (SSD) 8 8 ht kg/m ³ kg/m ³				;				900		
% 26 % 26 kg/m ³ 1,585 kg/m ³ 1,786 8	8 8 8 kg/m ³ kg/m ³	Bulk Specific Gra	avity (SSD)		77.7			<b>,</b>	9 6		
% 26 ht kg/m ³ 1,585 kg/m ³ 1,786 8	% kg/m ³ kg/m ³	Absorption		dp				η,	674		
ht kg/m ³ 1,585 6 kg/m ³ 1,786 7	ht kg/m ³ kg/m ³	Abrasion Loss			26			4.	654		
kg/m³ 1,585 kg/m³ 1,786 8	kg/m³ kg/m³	Dry Unit Weight		,	0.4			ı, nu	229		
kg/m³ 1,786	kg/m³	Lose	-	kg/m³	1,585			ו פא	559		
( ) ( ) ( ) ( ) ( ) ( ) ( ) ( ) ( ) ( )		Roded		kg/m ³	1,786			_	535		
						1111111111111		σ	582		

Remarks: Sample were taken from manufactured PCC mix. Flexural strength of each test No. were the mean value of 3 specimens, and tested by the third-point loading method.

582

Average

#### QUALITY CONTROL TEST RESULTS OF EXPERIMENTAL PAVEMENT CONSTRUCTION

55 - 85 40 - 75 0 - 12 Spec. 100 TABLE 2 MODEL NO. 2 SBST: SUBBASE COURSE, h = 8 cm 0 + 150 Average 1.5 m from Center Line 0 + 100 0 + 20 50 mm % 25 mm % 9.5 mm % 0.425 mm % 0.075 mm % Moisture Content Compaction Degree Left Lane Field Density Test Items Chainage % Passing Grading: a Sieve 55 40 - 75 0 - 12 Spec. 0 + 150 Average TABLE 1 MODEL NO. 1 GR: SUBBASE COURSE, h = 5 cm 1.5 m from Center Line 001:+0 0 + 20 50 mm x 25 mm x 9.5 mm x 0.425 mm x Field Density gr/cm³ Moisture Content Compaction Degree Left Lane Test Items Chainage % Passing Grading: a Sieve

Mignt Lane		17 dl C*T	1.5 m Irom Center Line	เาทิย			augra augru	Į.		11 m c-7	1.5 m irom center line	Line		
Chainage Test Items	-	05 + 0	0 + 50 0 + 100 0 + 150	0 + 150	Average	Spec	Chainage Test Items	ស		0 + 20	0 + 100	0 + 150	0 + 50 0 + 100 0 + 150 Average	Spec.
Grading: 50	% are	100	100	100	100	100	Grading:	50	A HE	100	100	100	100	100
x Passing 25	2 2	82	85	89	85	55 - 85		25	が見	- 89 65	94	83	25	55 - 85
a Sieve 9.5	X mm	74	74	75	7.4	40 - 75	a Sieve	5	mm %	80	ee	71	81	40 - 75
0.425	25 mm %	,	ı	į	ı			0.425 mm %	m x			; 1	. <b>.</b>	: •
0.0	0.075 mm %	12	ı	12	12	0 12	-	0.075 mm %	× 60	7	1	ø	10	0 - 12
Moisture Content	×	12.6	13.2	υ. 6	11.8		Moisture Content	tent	*	11.4		14.3	12.5	
Field Density gr/cm ³	gr/cm3	1.90	1.92	1.96	1.93		Field Density		gr/cm ³	1.94	1.98	1.90	1.94	:
Compaction Degree	*	88	66	101	98	>95	Compaction Degree	egree)	×	100		86	100	>85

TABLE 3 MODEL NO. 3 DEST: SUBBASE COURSE, h = 9 cm

TABLE 4 MODEL NO. 4 BMP: SUBBASE COURSE, h = 5 cm

	· · ·	ווס אן דוסאן כפוונפן דזוופ	Line Line	-	:	Left. Lane	,	1.5 m from Center Line	Center L	ne.		
Chainage Test Items	0 + 50	0 + 100	0 + 150	Average	Spec.	Chainage Test Items		0 + 20 0	+ 100	0 + 150	Average	Spec.
Grading: 50 mm % Passing 25 mm % a Sieve 9.5 mm %	100 74 74	100 84 71	100 86 72	100 78 72	100 55 - 85 40 - 75	Grading: 50 % Passing 25 a Sieve 9.5	* * * * * * * * * * * * * * * * * * *	100 88 77	100 82 73	100 83 71	160 84 74	100 55 - 85 40 - 75
	9	: 		10	( ) E	3.23	2 日 日 2 名	:	1 =	- 21	: (11, <b>4</b> )	1 6
Moisture Content x Field Density gr/cm ³ Compaction Degree x	15.5	14.3 1.96 101	15.0 2.03 105	14.9 1.99 103	395	Moisture Content Field Density g Compaction Degree	gr/cm ³	16.5 1,90 98	10.2 1.88 97	13.8 2.02 104	13.5 1.93 100	>95
				:			:		. 1	:	: : :	
Right Lane	I.5 m fr	1.5 m from Center Line	Line			Right Lane		1.5 m from Center Line	Center L	ine		
Chainage Test Items	0 + 20	0 + 100	0 + 150	Average	Spec.	Chainage Test Items		0 + 20 0	+ 100	0 + 150	Average	Spec
. 50 25	100 85	100	100	100 90	100. 55 - 85		X X		100 84	100	100	100 55 - 85
a Sieve 9.5 mm % 0.425	ဥ ၊ စ	76	80 ±		40 - 75	a Sieve 9.5 0.425	 	4 -	72 - °	8 1 5	7 <u>1</u> 2	40 - 75
Moisture Content % Field Density gr/cm ³	14.2	14.5 1.90	15.1	14.4	. 9	Moisture Content Field Density g		14.0 1.86	0.0 1.92	14.0	12.7	

55 - 85 40 - 75 0 - 12 40 - 75 55 - 85 Spec. 300 100 MODEL NO. 6 SBST: SUBBASE COURSE, h = 12 cm 1.99 Average Average 16.2 100 87 78 27 11 15.7 0 + 150 2.02 0 + 150 16.0 16.2 100 38 77 77 26 11 81 75 17 1.5 m from Center Line 1.5 m from Center Line 0 + 100 0 + 1001.97 .6 100 93 84 23 11 15.1 85 75 6 1.96 0 + 20 0 + 20 16.0 31 32 10 16.1 84 74 33 0.425 mm % gr/cm³ Field Density gr/cm3 2 E E S 1 mm Z E 0.425 mm % 0.075 mm % TABLE 6 Moisture Content Moisture Content Compaction Degree Compaction Degree 9.5 Right Lane Field Density Left Lane Test Items Test Items Chainage Chainage % Passing % Passing a Sieve Grading: Grading: a Sieve 55 - 85 40 - 75 0 - 12 40 - 75 55 - 85 Spec. Spec. 100 Average TABLE 5 MODEL NO. 5 GR: SUBBASE COURSE, h = 8 cm Average 0 + 150 0 + 100 0 + 150 95 82 1.5 m from Center Line 1.5 m from Center Line 0 + 100 1.94 100 100 90 18 10 0 + 20 0 + 20 100 98 88 23 91 13 gr/cm³ 0.425 mm % 0.075 mm % 0.425 mm % 0.075 mm % gr/cm³ 2 音 調響を表 2 and 22 . 13. Moisture Content Compaction Degree Compaction Degree **0** Moisture Content Right Lane Field Density Left Lane Field Density Test Items Test Items Chainage Chainage % Passing z Passing Grading: a Steve Grading: a Sieve

55 - 85 40 - 75 -0 - 120. - 12 55 - 85 40 - 75 Spec Spec. 100 8 >95 795 TABLE 8 MODEL NO. 8 BMP: SUBBASE COURSE, h = 10 cm 1.97 Average Average 100 87 77 35 32 82 102 0 + 150 0 + 150 1.95 10.1 100 90 76 30 30 8 101 1.5 m from Center Line 1.5 m from Center Line 0 + 100 0 + 100 2.05 11.6 100 91 81 36 6 5 8 8 2 2 1.92 1.86 0 + 20 0 + 50 96 88 77 30 93 7. 2. 2. gr/cm3 R K * E gr/cm³ 22 0.425 mm % 0.075 RM X * × 0.425 mm X 0.075 mm x E Maisture Content Compaction Degree 9.5 Compaction Degree Moisture Content Field Density Test Items . Right Lane Field Density Left Lane 50 Test Items Chainage Chainage z Passing % Passing Grading: Grading: a Sieve a Sieve 40 - 75 55 - 85 0 - 12 55 - 85 40 - 750 - 12Spec. Spec. 001 100 **582** TABLE 7 MODEL NO. 7 DBST: SUBBASE COURSE, h = 14 cm Average Average 100 85 76 102 0 + 1501.96 1.64 0 + 15016.2 10.3 1.5 m from Center Line 100 92 86 1.5 m from Center Line 80 72 0 + 100 1.95 0 + .10012.8 ç 100 83 70 50 50 57 ເກ 30 2 03 0 + 20 0 + 20 52 100 82 33 66 gr/cm³ men % gr/cm³ 0.075 mm % 冒 % Em. EE X E X MI X × 0.425 mm % 0.425 mm % 0.075 mm % Moisture Content 5 5 ر د Compaction Degree Compaction Degree Moisture Content Right Lane Test Items Field Density. Left Lane Field Density Test Items Chainage Chainage Grading: % Passing % Passing a Sieve Grading: a Sieve

1.5 m from Center Line														
1.5 m from Center Line   1.5 m from Center L	TABLE 9	NO. 9 DBS	T: SUBBASE 1st Lay		= 30 cm cm	:: :: :: ::				<b>C</b>	BST: SUBBAI	SE COURSE,	л = 30 сm 5 сm	
0 + 50 0 + 150	:	1.5 m fro	n Center L	ine		• [		Left Lane		1.5 m fr	om Center	Line		
## 100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100	Chainage Test ltems	+	+ 100	+ 150	Average	Spec.		Chainage Test Items			001.+0	0 + 150	Average	Spec
5 mm x 42 34 33 36 12 0.425 mm x 30 29 28 2 5 mm x 18 11 11 13 0 - 12 0.075 mm x 6 4 5 5 12 12 3 1 14 1 13 0 - 12 0.075 mm x 6 6 4 5 5 10 12 0 12 12 3 1 1 13 0 - 12 0 10 10 10 10 10 10 10 10 10 10 10 10 1	LO.	100 91 82	100 82 74	100 79 72	100 83 76	100 55 - 85 40 - 75		""	2	100 82 69	100 78 69		100 77 67	100 55 - 85 40 - 75
## 105   105   104   1.93   2.02      1.5 m from Center Line	22 22	42 118 11.4	34 11 10.1	33 10.7	36 13 10.8	15 4	æ	0. 0.  oisture Conten	in in	30 6 7.0	29 4 12.0	28 12.5 5.3	29 5 10.4	0 - 12
Lane 1.5 m from Center Line		2.10	2.04	1.93	2.02	>95	, U	field Density Compaction Degr		2.08	103	1.98	2.02	>95
Test Items  To + 50 0 + 100 0 + 150 Average Spec.  To + 100 0 + 150 0 + 150 0 + 150 Average Spec.  To + 100 0 + 150 Average Spec.  To + 100 0 + 150 0 + 150 Average Spec.  To + 100 0 + 150 0 + 150 0 + 150 Average Spec.  To + 100 0 + 150 0 + 150 0 + 150 0 + 150 0 + 150 0 + 150 Average Spec.  To + 100 0 + 150 0 + 150 0 + 150 0 + 150 0 + 150 0 + 150 Average Spec.  To + 100 0 + 150 0 + 150 0 + 150 0 + 150 0 + 150 0 + 150 0 + 150 Average Spec.  To + 100 0 + 150 0 + 150 0 + 150 0 + 150 0 + 150 0 + 150 0 + 150 0 + 150 0 + 150 0 + 150 0 + 150 0 + 150 0 + 150 0 + 150 0 + 150 0 + 150 0 + 150 0 + 150 0 + 150 0 + 150 0 + 150 0 + 150 0 + 150 0 + 150 0 + 150 0 + 150 0 + 150 0 + 150 0 + 150 0 + 150 0 + 150 0 + 150 0 + 150 0 + 150 0 + 150 0 + 150 0 + 150 0 + 150 0 + 150 0 + 150 0 + 150 0 + 150 0 + 150 0 + 150 0 + 150 0 + 150 0 + 150 0 + 150 0 + 150 0 + 150 0 + 150 0 + 150 0 + 150 0 + 150 0 + 150 0 + 150 0 + 150 0 + 150 0 + 150 0 + 150 0 + 150 0 + 150 0 + 150 0 + 150 0 + 150 0 + 150 0 + 150 0 + 150 0 + 150 0 + 150 0 + 150 0 + 150 0 + 150 0 + 150 0 + 150 0 + 150 0 + 150 0 + 150 0 + 150 0 + 150 0 + 150 0 + 150 0 + 150 0 + 150 0 + 150 0 + 150 0 + 150 0 + 150 0 + 150 0 + 150 0 + 150 0 + 150 0 + 150 0 + 150 0 + 150 0 + 150 0 + 150 0 + 150 0 + 150 0 + 150 0 + 150 0 + 150 0 + 150 0 + 150 0 + 150 0 + 150 0 + 150 0 + 150 0 + 150 0 + 150 0 + 150 0 + 150 0 + 150 0 + 150 0 + 150 0 + 150 0 + 150 0 + 150 0 + 150 0 + 150 0 + 150 0 + 150 0 + 150 0 + 150 0 + 150 0 + 150 0 + 150 0 + 150 0 + 150 0 + 150 0 + 150 0 + 150 0 + 150 0 + 150 0 + 150 0 + 150 0 + 150 0 + 150 0 + 150 0 + 150 0 + 150 0 + 150 0 + 150 0 + 150 0 + 150 0 + 150 0 + 150 0 + 150 0 + 150 0 + 150 0 + 150 0 + 150 0 + 150 0 + 150 0 + 150 0 + 150 0 + 150 0 + 150 0 + 150 0 + 150 0 + 150 0 + 150 0 + 150 0 + 150 0 + 150 0 + 150 0 + 150 0 + 150 0 + 150 0 + 150 0 + 150 0 + 150 0 + 150 0 + 150 0 + 150 0 + 150 0 + 150 0 + 150 0 + 150 0 + 150 0 + 150 0 + 150 0 + 150 0 + 150 0 + 150 0 + 150 0 + 150 0	Right Lane	1.5 m fr	om Center I	Line				Right Lane		1.5 m fi	om Center	Line	3	
50 mm x 100 100 100 100 000 Grading; 50 mm x 100 100 100 100 100 100 100 100 100 1	Chainage Test Items	0 + 50	0 + 100	0 + 150	Average	Spec.	•	Chainage Test Items		0 + 20		0 + 150	Average	Spec.
x     16.3     11.9     9.0     12.4     Moisture Content     x     6.5     13.5     9.8       gr/cm ² 1.94     2.04     2.04     Field Density     gr/cm ³ 2.39     1.96     2.11       x     100     110     100     111     100     111	50 mm 25 mm 9.5 mm 0.425 mm 0.075 mm	100 94 75 36	100 82 74 33	100 78 70 32 8	200 88 73 84 9			ading: S Passing 2 Sieve	5 425 075	100 85 73 32 8	100 69 52 26 4	100 79 72 30	100 78 69 29 5	100 55 - 85 40 - 75 0 - 12
cor for the transfer we have the transfer with t	a)	·· Ă	11.9 2.04 105	9.0 2.14 110	12.4 2.04	>95	<b>v</b>	Moisture Content Field Density Compaction Degree		2	13.5 1.96 101	9.8 2.11 109	9.9 2.15 111	\$84

0 - 12 40 - 75 55 - 85 55 - 85 40 - 75 i, Spec. Spec 100 8 565 TABLE 12 MODEL NO. 10 BMP: SUBBASE COURSE, h = 26 cm 1.88 Average 1.84 Average 12.3 15.3 100 82 72 32 2nd Layer, h = 11 cm 73 65 3 0 + 150 0 + 150 1.82 15.1 100 77 69 87 87 81 36 29 1.5 m from Center Line 1.5 m from Center Line 1.99 0 + 100 0 + 1001.86 16.4 64 Ċ 52 100 99 0 + 20 7.87 1.82 0 + 50 95 gr/cm³ 15 O 15 gr/cm³ 0.425 mm 2 ٠-, 0.425 mm % 0.075 mm % 0.075 nm 2 g Compaction Degree 9,5 Compaction Degree Moisture Content Moisture Content Right Lane Field Density. Left Lane 2 20 Field Density Test Items Test Items Chainage Chainage Grading: % Passing % Passing Grading: a Sieve a Sieve 55 - 85 0 - 12 55 - 85 40 - 75 40 - 75 0 - 12 Spec. Spec 100 100 292 995 TABLE 11 MODEL NO. 10 BMP: SUBBASE COURSE, h = 26 cm Average Average 1.97 12.6 10 ist Layer, h = 15 cm 75 36 11 0 + 1501.91 0 + 1501.87 12.6 12.9 100 85 77 35 100 78 72 33 1.5 m from Center Line 1.5 m from Center Line 0 + 100 0 + 100 1.92 1.97 3.8 12.5 100 81 75 36 12. 2 83 75 35 1.81 2.06 0 + 20 0 + 20 ~ ဗ္ဗ 38 0.425 mm × gr/cm3 gr/cm³ * * E % E E E 0.075 mm % Χ 0.425 mm % 0.075 mm % Х х 7 CH ю Б Compaction Degree ۍ ت Compaction Degree Moisture Contend Moisture Content Right Lane Left Lane Field Density Field Density Test items Test Items Chainage Chainage % Passing % Passing Grading: Grading: a Sieve a Sieve

55 - 85 40 - 75 40 - 75 55 - 85 Spec. Spec. 100 00 100 TABLE 14 MODEL NO. 12 AC 5 cm: SUBBASE COURSE, h = 6 cm 1.95 0 + 150 Average Average 0 + 150 2.01 1.5 m from Center Line 100 85 73 33 100 77 68 32 1.5 m from Center Line 0 + 100 0 + 100 100 0 + 50 0 + 20 gr/cm³ gr/cm3 10 mm N EE 7 EE 馬 0.075 mm % 0.425 mm % 0.075 mm z 0.425 mm % Compaction Degree Compaction Degree 5,5 Moisture Content Moisture Content Right Lane Field Density Left Lane Field Density Test items Test Items Chainage Chainage % Passing % Passing Grading: Grading: a Sieve a Sieve 55 - 85 55 - 85 0 - 12 40 - 75 40 - 75 0 - 12 Spec. Spec. 298 100 100 TABLE 13 MODEL NO. 11 AC 4 cm: SUBBASE COURSE, h = 8 cm 0 + 150 Average 0 + 150 Average 1.94 71 59 33 1.91 30 1.5 m from Center Line 1.5 m from Center Line. 0 + 50 0 + 100 0 + 100 1.92 1.81 0 + 20 0.075 mm % gr/cm3 gr/cm³ X E8 Mm. X K E 2000年 0.425 mm % 0.075 mm % 0.425 mm % 9.5 Compaction Degree Compaction Degree 9.5 Moisture Content Moisture Content Right Lane Field Density 50 Field Density 50 25 Left Lane Test Items Test ltems Chainage Chainage x Passing % Passing Grading: Grading: a Sieve a Sieve

40 - 75 40 - 75 0 - 12 55 - 85 55 - 85 Spec. Spec. 100 100 **3**82 ×95 TABLE 16 MODEL NO. 14 BMP: SUBBASE COURSE, h = 16 cm Average Average . 86 79 0 + 1500 + 150 1.5 m from Center Line 3 2 2 1.5 m from Center Line 0 + 100 0 + 100 100 84 75 0 + 20 0 + 20 85 75 O) Field Density gr/cm3 是 gr/cm3 × == 0.425 mm % 0.075 mm % 0.425 пп % 0.075 mm % Moisture Content Compaction Degree Compaction Degree 9.5 Moisture Content Right Lane Left Lane 25 Field Density Test Items Test Items Chainage Chainage Z Passing X Passing Grading: Grading: a Sieve a Sieve 55 - 85 40 - 75 0 - 12 55 - 85 Spec. Spec 001 9 295 TABLE 15 MODEL NO. 13 DBST: SUBBASE COURSE, h = 13 cm Average Average 9 100 83 75 0 + 150 0 + 150 10.4 100 73 10 1.5 m from Center Line 1.5 m from Center Line 0 + 100 0 + 100 10 0 + 20 33.6 0 + 20 80 10 88 gr/cm³ gr/cm3 祖祖 ж е E E 0.425 和加 % × = 0.075 mm % 74 EEE 0.425 mm × 0.075 mm 2 Compaction Degree Compaction Degree ເກ ເກ Moisture Content e C Moisture Content Right Lane Field Density Left Lane Field Density Test Items Test Items Chainage Chainage a Sieve % Passing Grading: Z Passing Grading: a Sieve

Left Lane	1.5 m from	1.5 m from Center Line	ine			Left Lane	1.5 m from Center Line	Center L	ìne	· •	•
Chainage Test ltems	0 + 20	0 + 100	0 + 150 Average	Average	Spec.	Chainage Test Items	0 + 20 0	100	0 + 150	Average	Spec.
50 an	100	100	100	100		50	100	100	100	100	100
% Passing 25 mm %	3 30	89 u	73	76	553 1 255	Passing, 25	95	06 6	16	16	55 - 85
0.425 mm	è i	: B: ‡	, 0 1	2 I	6/ I 0#	0.425 mm x	37 8	34	20	30	04 1 ( ) 1 00
0.075 mm %	<b>60</b>	12	60		0 - 12	0.075 mm %	12	80	Ç1	10	0 - 12
a t	11.5	14.4	12.8	12.9		t.	4.5	8	4.5	6.4	
Field Density gr/cm ² Compaction Degree %	2.00	1.82	1.77 91	1.86 96	>95	Field Density gr/cm ³ Compaction Degree %	2.05 106	2.06 106	2.13	2.08	>95
	:		.:								:
			-							·*.	
			s.				- et - et - :				
Right Lane	1.5 m fro	1.5 m from Center Line	Cine			Right Lane	1.5 m from	from Center L	Line	** * .	
Chainage Test Items	0 + 0	0 + 100	0 + 150	Average	Spec.	Chainage Test Items	0 05 + 0	0 + 100	0 + 150	Average	Spec.
Grading: 50 mm %	100	100	100	100	100	Grading: 50 mm %	100	100	100	100	100
2 2	76	78	82	80	55 - 85	8 . 25	85	83	71	98	55 - 85
Sieve 9.5 mm x	71	74	22 1	75	40 - 75	a Sieve 9.5 mm &	7.	69	08 6	73	40 - 75
0.075 mm ×		11	10	10	0 - 12	0.075 mm 2	3 ::	<b>.</b> 65	12	5 🛱	0 - 12
-i us	12.3	15.3	13.1	13.6		Moisture Content %	6.	00	ισ 1σ	ω u	
Field Density gr/cm ³	2.02	1.81	1.90	1.91		Field Density gr/cm ³	2.07	2.27	2.17	2.17	
Compaction Degree	č	6	6								

40 - 7540 - 7555 - 85 55 - 85 Spec. Spec. 2001 86 100 TABLE 20 MODEL NO. 16 AC 5 cm: SUBBASE COURSE, h = 21 cm 2nd Layer, h = 15cm Average Average 2.12 100 87 56 22 115 107 69 0 + 150 0 + 150ι. σ 1.5 m from Center Line 100 89 71 32 8 8 8 1.5 m from Center Line 0 + 100 0 + 100 100 83 72 21 11 85 58 58 20 0 + 20 0 0 + 20 116 78 22 gr/cm3 0.425 mm x 0.075 mm x gr/cm3 員 と 0.075 mm % × **光 光** 層 層 × 0.425 mm % Compaction Degree Compaction Degree 9 9.5 Moisture Content Moisture Content Right Lane Field Density Left Lane Field Density Test Items Test Items: Chainage Chainage % Passing z Passing Grading: a Sieve Grading: a Sieve 0 - 12 55 - 85 40 - 75 40 - 7555 - 85 0 - 12 Spec Spec. 100 100 298 TABLE 19 MODEL NO. 16 AC 5 cm: SUBBASE COURSE, h = 21 cm lst Layer, h = 6 cm 1.80 Average Average 10.8 15.6 100 78 71 33 100 91 81 0 + 150 1.65 0 + 15016.5 100 70 62 27 1.5 m from Center Line 1.5 m from Center Line 1.70 0 + 100 0 + 100 8 14.3 100 76 68 29 96 88 1.84 1.77 13.9 0 + 20 0 + 20 83 36 gr/cm³ gr/cm³% 7 E 0.075 mm % E E E EE % N E 0.425 mm % 0.425 mm % 0.075 mm × 3.5 Compaction Degree 9 S Moisture Content Compaction Degree Moisture Content Right Lane Left Lane 25 Field Density Field Density Test Items Test Items Chainage Chainage % Passing % Passing a Sieve Grading: Grading: a Sieve

40 - 75 55 - 85 0 - 12 55 - 85 0 + 025 0 + 075 0 + 125 0 +175 Average Spec. Spec 100 100 2.039 2.049 TABLE 22 MODEL NO. 18 PPC 18cm: SUBBASE COURSE, h = 20 cm 2.105 Average 100 83 52 23 12 104 106 82 61 22 12 2.019 0 + 175 & 9 80 100 81 59 29 61 22 2.020 1.5 m from Center Line 2.190 0 + 075 0 + 125 1.5 m from Center Line 92 56 20 e 82 82 83 83 102 2.096 2.044 10.4 m 83 60 22 106 2.039 0 + 025 80 59 19 gr/cm³ gr/cm3 7. CT. × **K** な音 0.425 mm % 0.075 mm % Mar. 0.425 mm % : 0、075 证的 % و. در Compaction Degree Compaction Degree ر دو Moisture Content Moisture Content Right Lane Left Lane Field Density 25 Field Density Test Items Test Items Station Station % Passing % Passing Grading: Grading: a Sieve a Sieve 55 - 85 40 - 750 - 12Spec 55 - 85 40 - 750 - 120 + 025 0 + 075 0 + 125 0 + 175 Average Spec. **7**82 298 TABLE 21 MODEL NO. 17 AC 5 cm: SUBBASE COURSE, h = 19 cm 2.010 2.039 0 + 175 Average 8 8 84 65 13 82 63 22 12 2.059 2.074 6 24 81 84 64 86 23 12 84 2,018 2.040 0 + 075 0 + 125 1.5 m from Center Line 1.5 m from Center Line 89 62 20 2.075 2.000 61 20 2.000 1.927 10.2 0 + 025 65 22 gr/cm3 gr/cm3 2 EC E E K m Z 0.425 mm % 0.075 mm % х 0.425 mm % 0.075 mm % × Compaction Degree Compaction Degree n) 9.5 Moisture Content Moisture Content Right Lane Left Lane Field Density Field Density Test liems Test Items Station Station % Passing * Passing Grading: a Sieve Gading: a Sieve

3	3 .00	4	170000 7000 · ) 770	1	3						1000	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	5	:
Left Lane	1.5	1.5 m from Center Line	Center 1	ine		:		Left Lane	:	1.5 m fr	1.5 m from Center Line	Line		1.
Chainage Test ltems	÷ 0	50 0	+ 100	0 + 150	Average	Spec.		Chainage Test Items		0 + 50	0 + 100	0 + 150	Average	Spec.
Grading: 37.5 mm % Passing 19 mm a Sieve 4.75 mm 0.425 mm		; ;	100 79 51 22 13	100 71 44 15	100 73 47 17	100 60 - 85 30 - 55 8 - 25 2 - 14		Grading: 37.5 % Passing 19 a Sieve 4.75 0.425	17.5 mm x 9 mm x 4.75 mm x 0.425 mm x	100 71 55 21 10	100 74 58: 21	100 67 49 119	100 71 20 20	100 60 - 85 30 - 55 8 - 25
Moisture Content Field Density gr/ Compaction Degree Prime Coat	X E X E	. 92	10.5 1.92 99 1.08	7.1 1.94 100 1.12	10.2 1.93 99 I.10	>100 1.20	ae με, Ο Δι, [	Moisture Content Field Density Compaction Degree Prime Coat	~~ I	10.5	12.5 1.95 101 0.98	12.5 1.94 100 0.85	11.9 1.94 100 0.92	>100
Right Lane	1.5	E	from Center Line	<u>ه</u> م		;	·	Right Lane		1.5 m fro	m from Center Line	e E		
Chainage Test Items	•	÷ 50 0	+ 100	0 + 150	Average	Spec	1	Chainage Test Items	4.5	0 + 50	0 + 100	0 + 150	Average	Sp. Co.
Grading: 37.5 mm a Passing 19 mm a Sieve 4.75 mm 0.425 mm 0.075 mm Moisture Content Field Density gr/c Compaction Degree Prime Coat 111/	ב אאאאאא פר	7 7 7 8 9 9 8 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	100 74 52 19 10 11.6 2.00 103	100 53 37 12 7 10.9 1.96 1.11	100 68 47 16 9 9 11.1 1.98 102	100 80 - 85 30 - 55 8 - 25 2 - 14 2 - 14		Grading: 37.5 % Passing 19 a Sieve 4.75 0.425 Moisture Content Field Density Compaction Degree Prime Coat	37.5 mm x 4.75 mm x 0.425 mm x 0.075 mm x tent x y gr/cm³ egree x	100 87 66 26 10 11.7 1.98 102 1.19	100 67 50 16 9 13.1 2.00 103	100 93 73 31 12 13.0 1.94 100	100 82 83 24 24 10 12.6 1.97 102	100 60 - 85 30 - 55 8 - 25 2 - 14 7100 1.20
							i					  -		1

TABLE 25 MODEL NO. 4  See 1.5 m; 100  37.5 mm x 100  37.5 mm x 49  0.425 mm x 49  0.075 mm x 12.8  content x 12.8  nsity gr/cm ³ 1.9  nsity gr/cm ³ 1.9	om Center L  100 555 49 17 12 14.6 1.98	1 1 1 1 1 1 1 1 2 5 1 1 1 2 5 1 1 1 2 5 1 1 1 2 5 1 1 1 2 5 1 1 1 2 5 1 1 1 2 5 1 1 1 2 5 1 1 1 2 5 1 1 1 2 5 1 1 1 2 5 1 1 1 2 5 1 1 1 1		Spec. 100 60 - 85 30 - 55 2 - 14	Left Lane Chainage Test Items Grading: 37.5 mm x x Passing 19 mm x a Sieve 4.75 mm x 0.0425 mm x Noisture Content x Field Density gr/cm³	1.5 m 100 E E 85 85 85 85 85 85 85 85 85 85 85 85 85	TABLE 25 MODEL NO. 5 SESI: BASE COURSE. R.  Lane	100 84 85 22 22	- 15 cm Average	° oads
ltems  37.5 mm x 1  37.5 mm x 2  4.75 mm x 0.425 mm x  0.075 mm x Content x 2  nsity gr/cm ³ at lit/m ²	0 + 100 100 65 49 17 12 14.6 1.98			8   8   1   1	eems 37.5 19 4.75 0.425 0.075	жижики 6	0 019	0	Average	Spec.
i 37.5 mm x 1 ng 19 mm x 4.75 mm x 0.425 mm x 0.075 mm x content x ensity gr/cm³ ion Degree x 1 oat 111/m²	- · · ·	100 71 51 24 7 12.4 1.96	<u>ن</u>	8, , , ,	37.5 19 4.75 0.426 0.075	* * * * * * * * * * * * * * * * * * *				
4.75 mm % 0.425 mm % 0.075 mm % 0.075 mm % 50ntent % gr/cm³ ity gr/cm³ 11t/m² t	-	51 24 7 12.4 1.95		1 1 1	4.75 0.425 0.075 Content	, , , , , , , , , , , , , , , , , , ,		-	100	100 85
gr/cm ³		12.4	6 133	1. 1	0.075 mm 0.075 mm Moisture Content Field Density gr/(	. x x 5			5.4	30 - 55
% gr/cm ³ % 1		12.4 1.95	13.3	:	Moisture Content Field Density gr/c			12	°. 4 ;∓	2: - 14
% 10		101	1.97				2.29 2.30	3.5	3.5	
	1.22	1.26	101	>100 1.20	Compaction Degree Prime Coat lit.	Ä	15 11	¥ .	101	>100 1.20
	-									
Right Lane	1.5 m from Center Line	ine			Right Lane	153 Fri	1.5 m from Center Line	r Line	-	
Chainage 0 + 50 Test Items	0 + 100	0 + 150	Average	Spec.	Chainage Test Items	+ 0	. 50 0 + 100	0 + 150	Average	Spec.
Grading: 37.5 mm z 100 2 Passing 19 mm z 68	100	.001	100	100	Grading: 37.5 mm	: X	00 100 75 81	100	100	100
4.75 Em % 0.425 mm %	47	212	50	30 - 126 30 - 126 30 - 126	4.75		:	51.	52	30 - 55
75 mm x	5 S	12	( GD )	1.1	32	. :	; <b>y⊷t</b> :	를 를 -	្ត	2 - 14
gr/cm³		13.4	12.6				23.8		2.22	
Compaction Degree $lpha=100$ Frime Coat 1:24	104	101 0.88	102	>100	Compaction Degree	× × 1:1/23	93 100 1.20 1.10	99	60 €	7100

60 - 85 30 - 55 · 8 + 25 2 - 14 8 - 23 2 - 14 >100 Spec. 100 Spec ខ្ព Average Average 100 83 50 19 107 110 . 09 0 + 150 0 + 150 1.5 m from Center Line 107 1.5 m from Center Line 0 + 100 0 + 100 108 53 0 + 20 0 + 20 iit/m² 0.425 mm % gr/cm³ 1 i t/m2 ž K X 5 gr/cm3 4.75 mm % 0.425 mm % 0.075 mm % Moisture Content 4.75 Compaction Degree Compaction Degree Moisture Content 37.5 Right Lane Left Lane 5 Field Density Field Density Chainage Test Items Test Items Chainage Prime Coat Prime Coat z Passing % Passing Grading: Grading: a Sieve a Sieve 60 - 85 60 - 85 30 - 55 8 - 25 30 - 55 8 - 25 2 - 14 2 - 14 Spec. Spec. ×100 >100 201 Average Average 110 4.7 0 + 150 0 + 150 19 100 88 59 19 1.5 m from Center Line 1.5 m from Center Line 0 + 100 0 + 100 0 + 20 0 + 20 11 t/m2 gr/cm³ 11t/m2 K : : 0.075 mm % 0.075 mm % 4.75 mm % 0.425 mm % 0.425 mm % 4.75 Moisture Content Compaction Degree Compaction Degree Moisture Content 6 Right Lane Left Lane Field Density Field Density Test Items Test Items Chainage Chainage Prime Coat Prime Coat % Passing % Passing Grading: Grading: a Sieve a Sieve

MODEL NO. 8 BMP : BASE COURSE, h = 15 cm

TABLE 28

TABLE 27 MODEL NO. 7 DEST : BASE COURSE, h = 15 cm

30 - 55 8 - 25 2 - 14 100 -60 - 85 30 - 55 8 - 25 2 - 14 60 - 85>100 1.20 >100 Spec. Spec. 28 2.35 103 1.19 Ó 2.49 Average Average 5.1 105 100 91 56 19 200 89 57 19 TABLE 30 MODEL NO.10 BMP BASE COURSE, h = 15 cm I.5 m from Center Line 0 + .1502.33 0 + 150 100 88 55 18 100 89 : 55 : 13 1.5 m from Center Line 0 + 100 0 + 100 108 100 2.47 0 + 20 0 + 20 100 90 55 19 100 90 52 17 gr/cm3 1;t/m2 0.425 mm % 11 t/m2 K E E Field Density gr/cm3 0.075 mm 2 4.75 mm x 0.425 mm % 4.75 mm % Compaction Degree Compaction Degree Moisture Content Moisture Content 37.5 19 Right Lane 61 Field Density Left Lane Test Items Test Items Chainage % Passing Prime Cost Chainage Prime Coat % Passing Grading: a Sieve Grading: a Sieve 8 - 25 2 - 14 60 + 85 30 - 55 8 - 25 2 - 14 60 - 85 30 - 55 1.20 1.20 Spec. Spec. 00 7100 100 2.24 0 + 150 Average 2.12 1.16 MODEL NO. 9 DBST : BASE COURSE, h = 15 cm Average 3.8 100 93 63 22 10 100 91 65 0 + 150 65 23 10 100 91 68 22 7 1.5 m from Center Line 1.5 m from Center Line 0 + 100 0 + 100 93 53 22 0 + 20 0 + 20 100 90 65 24 11. 11 t/m-0.425 mm % 0.075 mm % 11t/m2 mm X gr/cm3 Field Density gr/cm3 4.75 mm % 0.425 mm % 0.075 mm % * * 4.75 mm % E TABLE 29 Compaction Degree Compaction Degree Moisture Content Moisture Content 37.5 Field Density 13 Right Lane 19 Left Lane Test Items Test Items Chainage Prime Coat Chainage Prime Coat % Passing % Passing Grading: Arading: a Sieve a Sieve

8 ~ 25 £0. 28 ~ .09 30 - 55 2 - 14 1.20 60 - 85 30 -- 55 8 - 25 2 - 14Spec. 100 Spec. 1.20 100 ×100 >100 TABLE 32' MODEL NO.12 "AC 5cm : BASE COURSE; h = 12 cm Average 2.31 2.31 Average 4:1 100 89 57 20 10 20 20 101 103 100 89 57 0 + 1500 + 150 1.5 m from Center Line 52 20 105 100 87 57 97 6 5 C 1.5 m from Center Line 0 + 100 0 + 100 100 100 54 39 ij 20 8 8 2.25 4.5 0 + 20 0 + 20 100 91 59 20 10 66 65 53 1114/四2 11t/m2 gr/cm3 4.75 mm % gr/cm³ X E z E 100 0.425 mm % 0.075 mm % 4.75 mm % 0.425 mm × 0.075 mm % E Moisture Content Moisture Content Test Items Chainage Compaction Degree 19 Compaction Degree 37.5 6.7 Right Lane Field Density Left Lane Field Density Test Items Chainage Prime Coat Prime Coat % Passing % Passing Grading: Grading: a Sieve a Sieve >100 8 - 25 8 - 25 30 - 55. 2 - 14>100 60 - 85 30 - 55 60:- 85 2 - 14 Spec. Spec. 100 100 TABLE 31 - MODEL NO.11 AC 4cm BASE COURSE, h = 12 cm 2.19 Average 2.10 1.22 Average .0.9 200 89 56 19 96 100 90 55 18 a) 0 + 150 0 + 120 200 88 88 53 100 90 5 1.5 m from Center Line 1.5 m from Center Line 0 + 100 0 + 100 20 100 ŝ 8 18 2.13 05 + 0 0 + 20 35 91 53 1 i t/m² gr/cm³ 11 t/m² 22 Field Density gr/cm³ E × 景 4.75 加图 % . 0.425 mm % 0.075 mm % Moisture Content 4.75 mm % 0.425 mm % 0.075 mm Z Moisture Content 臣 Compaction Degree Compaction Degree 37.5 37.5 19 Right Lane 39 Field Density Left Lane Test Items Test Items Cheinage Chainage Prime Coat Prime Coat z Passing z Passing Grading: Grading: a Sieve a Sieve

30 - 55 8 - 25 2 - 14 30.--55. 2 - 14 60 - 85 60 - 85 >100 Spec. Spec 100 7300 2.48 Average Average 10 109 100 90 58 0 + 100 0 + 120 1.5 m from Center Line 100 90 58 20 10 0 + 150 54 10 61 100 1.5 m from Center Line 0 + 100 113 92 77 53 0 + 20 0 + 20 100 84 48 15 100 89 56 11t/m² lit/m2 Field Density gr/cm³ Field Density gr/cm³ 4.75 BM X E . 0.425 mm % Moisture Content 2 Test Items E % 0.425 加田 % 0.075 mm % Moisture Content x Compaction Degree Compaction Degree 37.5 . 61 Right Lane Left Lane Test Items Chainage Chainage Prime Coat %-Passing Prime Coat % Passing a ·Si-eve Grading: a Sieve Grading: . 001< 8 - 25 2 - 14 60 - 85 50 - 85 30 - 55 30 - 55 8 - 25 2 - 141.20 Spec. Spec. 100 100 1.18 Average Average 100 86 54 19 100 88 54 0 + 150 2.30 0 + 150 100 : 82 51.... 1.5 m from Center Line 100 90 56 13 1.5 m from Center Line: 190 86 ...55... 0 + 100 0 + 100 102 0 + 0 1.13 0 + 50 100 90 57 20 100 97 53 lit/m2 Field Density gr/cm3 Field Density gr/cm3 111/m2 調響を 4.75 … 前即 2 0.425 mm % E E 8-Sieve ... 4.75 ...mm-% 0.425 mm % 7 mm 2 0.075 mm x 0.075 mm % Test I tems Moisture Content ... x Moisture Content Compaction Degree 19 Compaction Degree 37.5 z Passing 19 37.5 Left Lane Right Lane Chainage Test items Chainage Prime Coat Prime Coat % Passing Grading: Grading: a Sieve

TABLE 34 MODEL NO.14 BMP P BASE COURSE, h = 15 cm - ---

TABLE 33 -- MODEL NO.13-DBST : BASE COURSE, h = 15 cm ---

TABLE 35 MODEL NO.15 AC 4cm : BASE COURSE, h = 15 cm

TABLE 36 MODEL NO.16 AC 5cm : BASE COURSE, h = 15 cm

Left Lane	1.5 m fro	1.5 m from Center Line	Line		·.	Left Lane 1.5 m from Center Line	er Line		;
Chainage Test Items	0 + 20	0 + 100	0 + 150	Average	Spec	Chainage 0 + 50 0 + 100 Test Items	00 + 150	Average	Spec.
Grading: 37.5 mm x x Fassing 19 mm x a Sieve 4.75 mm x 0.425 mm x 0.075 mm x	100 85 51 18	100 85 50 17	100 84 48 : 17	100 85 50 17	100 50 - 85 30 - 55 8 - 25 2 - 14	Grading: 37.5 mm z 100 100 x Passing 19 mm z 91 90 a Sieve 4.75 mm z 70 66 0.425 mm z 24 24 0.075 mm z 8 12	100 81 58 20	100 87 83 65 23	100 . 60 - 85 30 - 55 8 - 25 2 - 14
Moisture Content X Field Density gr/cm ³ Compaction Degree X Prime Coat lit/m ²	4.5 2.50 110 1.06	3.8 2.52 111 1.38	3.9 2.39 105 1.19	4.1 2.47 109 1.21	)100 1.20	x 11:4 r/cm ³ 2:30 x 101 1 it/m ² 1.31	94 · Os 1   1	10.1 2.24 99 1.14	>100
Right Lane	1.5 m fro	1.5 m from Center Line	Line		٠.	Right Lane 1.5 m from Center Line	ter Line		
Chainage Test Items	0 + 30	0 + 100	0 + 150	Average	Spec.	Chainage 0 + 50 0 + 100 Test Items	00 0 + 150	Average	Spec.
ET E		100 92 56 21 11 11 3.1	100 70 40 13 5 3.9	100 82 50 17 8 3.6 2.37	30 - 85 30 - 55 8 - 25 2 - 14	Grading: 37.5 mm x 100 100  % Passing 19 mm x 92 89  a Sieve 4.75 mm x 55 58  0.425 mm x 20 18  0.075 mm x 10 9  Moisture Content x 4.1 5.6  Field Density gr/cm³ 2.32 2.28	100 83 55 20 20 7.77	100 88 88 56 19 19 5.8	100 60 - 85 30 - 55 8 - 25 2 - 14
Compaction Degree x Prime Coat lit/m²	108	1.33	101	104	>100	Compaction Degree $\approx$ 101 101 Prime Coat 11t/m ² 1.30 1.24	96 24 1.22	104	>100

TABLE 37 MODEL NO.17 AC 5cm : BASE COURSE; h = 15 cm

Left Lane		1.5 m fr	1.5 m from Center Line	Line			•
Station Test Items		0 + 025 0 + 075 0 + 125 0 + 175 Average Spec.	0 9 4 0 4 -	+ 125 0	+ 175 A	verage	Spec.
Grading: 37.5	37.5 PM %	100	100	100	100	100	100
% Passing 19	は屋	70	Ę	87	70	75 5	50 - 85
a.Sieve 4.75	,5 mm 2	88	37	42	36	38	30 - 55
0.4	0.425 mm %	23	21	27	22	23	8 - 25
0.0	0.075 mm z	82 74	14.	15	13	14	2 14
Moisture Content	×	8.7	8.6	Ø.8	8.4	8.7	
Field Density	gr/cm ³	2.308	2.203	2.266	2,203	2.245	
Compaction Degree	÷	109	104	107	104	106	>100

Station Test Items	ems	-	0 + 025	0 + 025 0 + 075 0 + 125 0 + 175 Average Spec.	0 + 125	0 + 175	Average	Spec.
Grading:	37.5	K E	100	100	130	100	100	100
z Passing	<b>6</b> 1	夏	71	74	7.2	85	76 6	50 - 85
a Sieve	4.75	H K	43	40	7	5.7	 	30 - 55
	0.425 mm %	2	21	20	23	24	2.2	8 - 25
	0.075 mm x	E E	12	1.4	13	14	13	2 - 14
Moisture Content	ontent	×	9.3	0.6	9.6	5	9	
Field Density		gr/cm3	2.331	2.220	2.181	2.287		
Compaction Degree	Degree	34	110	105	103	108	107	>100

Left Lane	1.5 m fro	1.5 m from Center Line	Line			Left Lane		1.5 m fr	1.5 m from Center Line	Line		
Chainage Test Items	0 + 20	0 + 100	0 + 150	Average	Spec.	Chainage Test Items		0 + 20	0 + 100	0 + 150	Average	Spec.
Grading: 25 mm % % Passing 9.5 mm %	100 65	100	100	100 66 56	100 50 - 85 34 - 65	Grading: 25 % Passing 9.5	۱.	100	100	100	100	100 50 - 85
	23	13 25	7 7 7	3 23	e e j			3 H E	7 H C2	50.02	21 10	1 1
Moisture Content % Field Density gr/cm ³ Compaction Degree %	13.8	13.0 1.96 102	14.8	13.8 1.93 101	>100	Moisture Content Field Density Compaction Degree	gr/cm³	5.5 2.53 107	4.5 2.60 110	3.8 2.41 102	4.6 2.51 106	>100
Right Lane	1.5 m fr	1.5 m from Center Line	Line			Right Lane		1.5 B fr	1.5 m from Center Line	Li s e		,
Chainage Test Items	0 + 50	0 + 100	0 + 150	Average	Spec.	Chainage Test Items		0 + 20	0 + 100	0 + 150	Average	Spec.
25 8 9.5	17.	100	100 56	100	8 .	2 2		100	100	100	100	8 1
a Sieve. 4.75 mm % 0.425 mm % 0.075 mm %	24 2	57 21 10	139	22 10	35 - 65 15 - 30 5 - 20	a Sieve 4.75 0.425 0.075	5 E % C 175 E	24	ທ ຕ ໝ ພ ພ ໝ	2 L	2 2 B	35 - 65 15 - 30 5 - 20
Moisture Content Krield Density gr/cm ³ Compaction Degree K	13.9 1.98	13.9 2.04 106	14.9	1.99	7100	Moisture Content Field Density Compaction Degree	gr/cm²	4.2 2.62	4.3 2.48	3.8 2.45	4.1 2.52	>100

TABLE 40 MODEL NO. 2, No. 5: SBST (5 mm) SURFACE COURSE

(Test results are mean value of 6 tests for each model)

Test Items		Design	Model No. 2	Model No. 6
Binder Spraying Rate	. eu			
1st Layer	kg/m²	1.4	1.38	1.43
Seal Coat	kg/m²	1.0	1.14	1.16
Binder Total	kg/m²	2.4	2.52	2.59
Aggregate Spreading Rate	Rate			
Chip (10~5 mm)	Kg/m²	14	14.48	14.09
Seal Coat Sand	Kg/m²	<b>≃</b> 0.	8.08	6.22
Aggregate Totai	kg/m²	22	22.56	20.31

TABLE 41 MODEL NO. 3, No. 7, No. 9, No. 11: DEST (15 mm) SURFACE COURSE  (Test results are mean value of 6 tests for each model)  Test Items Design Model Model Model Model  No. 3 No. 13 No. 13			
TABLE 41 MODEL NO. 3, No. 7, No. 9, No. 11: DEST (15 mm) SURI (Test results are mean value of 6 tests for each model)  Test Items Design Model Model Model Model	ACE COURSE		Model No. 13
TABLE 41 MODEL NO. 3, No. 7, No. 9, No. 11: DEST (15 mm (Test results are mean value of 6 tests for each model)  Test Items Design Model M	SUR		ode!
TABLE 41 MODEL NO. 3, No. 7, No. 9, No. 11: DBST (15  (Test results are mean value of 6 tests for each model  Test ltems Design Model Model  No. 3 No. 7	Ê		žΖ
TABLE 41 MODEL NO. 3, No. 7, No. 9, No. 11: DEST  (Test results are mean value of 6 tests for each b  Test Items Design Model Mc	Q5	nodel	odel
TABLE 41 MODEL NO. 3, No. 7, No. 9, No. 11: - (Test results are mean value of 6 tests for eac Test ltems Design Model	DBST	اء	žž
TABLE 41 MODEL NO. 3, No. 7, No. 9, No. (Test results are mean value of 6 tests for Test Items Design Mon	- ::	Dae.	de.
TABLE 41 MODEL NO. 3, No. 7, No. 9, No. 10 Clest results are mean value of 6 tests Test Items Design	<u>0</u>	for	₹,2
TABLE 41 MODEL NO. 3, No. 7, No. (Test results are mean value of 6 te Test Items Desi	C)	sts	E .
TABLE 41 MODEL NO. 3, No. 7, (Test results are mean value of	Š.	ود	Desi
TABLE 41 MODEL NO. 3, No. (Test results are mean value Test ltems		Į.	
TABLE 41 MODEL NO. 3, (Test results are mean v	No.	'alue	<u>,                                    </u>
TABLE 41 MODEL NO. Test results are mea	က်	5	5.3
TABLE 41 MODEL Test results are	2	ie.	
TABLE 41 MC (Test results Test liens	DEL.	are	
TABLE 41 (Test resu	×	1 ts	ems
TABLE (Test r	7	esn	<b>=</b>
조 : j	3.18	#	ies t
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Test Items		Design	Model No. 3	Model No. 7	Model No. 9	Model No. 13
Binder Spraying Rate	ıte					
1st Layer	kg/m²	1.4	1.64	1.48	1.87	1.51
2nd Layer	kg/m²	1.2	1.34	1.24	1.26	1.31
Seal Coat	kg/m²	г. Г.	1.29	1:41	1.38	1.46
Binder Total	kg/m²	2.4	4.27	4.13	4.51	4.28
Aggregate Spreading Rate	ng Rate		1			
1st Chip (20-10 mm) kg/m2	mm) kg/m²	22	22.9	23.5	22.2	24.6
2nd Chip (10- 5 mm) kg/m2	mm) kg/m²	12	11.8	11.6	10.5	10.6
Seal Coat Sand	kg/m²	φ :	ស	. sp	6.7	4.8
Aggregate Total	Kg/m²	. 04	. 0	40.7	39.4	40.4

Taying Rate  (40-20 mm) kg/m² 80 81.3 84.4 85.3 8 (20-10 mm) kg/m² 13 13.4 14.8 13.0 1 10.5 11.1 1 (20-10 mm) kg/m² 11 10.1 10.2 11.1 1 (Sand) kg/m² 5 8.1 6.0 6.5 8.1 kg/m² 2.7 2.73 2.76 2.44 kg/m² 1.8 1.81 1.77 1.87 kg/m² 1.5 1.42 1.48 1.52	(Test results are mean value of 6 tests for each model)	ean value of	6 tests	for each	mode[)		
kg/m² 80 81.3 84.4 85.3 8 kg/m² 13 13.4 14.8 13.0 1 kg/m² 11 10.1 10.2 11.1 1 kg/m² 5 8.1 6.0 6.5 kg/m² 110 112.9 115.4 115.9 11 kg/m² 2.7 2.73 2.76 2.44 kg/m² 1.8 1.81 1.77 1.87 kg/m² 1.5 1.42 1.48 1.52	Test ltems		Design	Nodel No. 4	Model No. 8	Model No. 10	Model No. 14
hmb kg/m² 80 81.3 84.4 85.3 8 hmb kg/m² 13 13.4 14.8 13.0 1 kg/m² 11 10.1 10.2 11.1 1 kg/m² 110 112.9 115.4 115.9 11 kg/m² 2.7 2.73 2.76 2.44 kg/m² 1.8 1.81 1.77 1.87 kg/m² 1.5 1.42 1.48 1.52 hmm kg/m² 1.5 1.42 1.48 1.52	Aggregate Spraying	Rate					
Mm) kg/m² 13 13.4 14.8 13.0 1 kg/m² 11 10.1 10.2 11.1 1 kg/m² 6 8.1 6.0 6.5 kg/m² 110 112.9 115.4 115.9 11 kg/m² 2.7 2.73 2.76 2.44 kg/m² 1.8 1.81 1.77 1.87 kg/m² 1.5 1.42 1.48 1.52	Base Layer (40-20	mm ) kg/m²	8	81.3	84.4	85.3	82.9
kg/m² 11 10.1 10.2 11.1 1 1 kg/m² 6 8.1 6.0 6.5   kg/m² 110 112.9 115.4 115.9 11 kg/m² 2.7 2.73 2.76 2.44 kg/m² 1.8 1.81 1.77 1.87 kg/m² 1.5 1.42 1.48 1.52		mm) kg/m²	E	13.4	14.8	13.0	:3 9
kg/m² 5 8.1 6.0 6.5 kg/m² 110 112.9 115.4 115.9 11 kg/m² 2.7 2.73 2.76 2.44 kg/m² 1.8 1.81 1.77 1.87 kg/m² 1.5 1.42 1.48 1.52		mm) kg/m²	11	10.1	10.2	11.1	10.9
kg/m² 110 112.9 115.4 115.9 11 kg/m² 2.7 2.73 2.76 2.44 kg/m² 1.8 1.81 1.77 1.87 kg/m² 1.5 1.42 1.48 1.52			9	8.1	0.0		5.0
kg/m² 2.7 2.73 2.76 2.44 kg/m² 1.8 1.81 1.77 1.87 kg/m² 1.5 1.42 1.48 1.52 br/m² 6.0 6.06 6.01 5.83	Agregate Total	kg/m²	011	112.9	115.4	115.9	114.4
kg/m² 2.7 2.73 2.76 2.44 kg/m² 1.8 1.81 1.77 1.87 kg/m² 1.5 1.42 1.48 1.52	Binder Spraying Rat	بە					
kg/m² 1.8 1.81 1.77 1.87 kg/m² 1.5 1.42 1.48 1.52 μσ/m² 6.0 6.06 6.01 6.83	Base Layer	kg/m²	2.7	2.73	2.76	2.44	2.61
kg/m² 1.5 1.42 1.48 1.52	2nd Layer	$k_g/m^2$	1.8	1.81	1.77	1.87	1.78
	3rd Layer	kg/m²	1.5	1.42	1.48	1.52	1.25
	Rinder Total	- kg/m²	c ç	7. 69.		60 60 10	ក្ ស្

TABLE 43 MCDEL NO. 11, No. 15: AC 4 cm SURFACE COURSE

(Test results are mean value of 6 tests for each model)	í
each	rete
for	ဗီ
tests	sphalt
9	₹
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 alue	П. 4
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mean	4C-3
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(Tes	Test

Test Items	Spec.	Model No. 11	Model No. 11 Model No. 15	Test Items
Mixing Laying Temperature °C laver Thickness	ı	156	149	Mixing Laying T
from Core Sample cm Core Density gr/m³		4.3 2.264 97.6	4.5 2.200 95.1	Layer inickness from Core Sampl Core Density Compaction Degr
Grading: 19 mm x x Passing 4.75 mm x a Sieve 2.36 mm x 0.300 mm x 0.075 mm x	100 45 - 65 33 - 53 10 - 20 3 - 8	100 61 46 12	100 63 46 12 4	Grading: % Passing a Sieve
Asphalt Content %	B. 7	5.69	5.66	Asphalt Content

TABLE 44 MODEL NO. 12, No. 16: AC 5 cm SURFACE COURSE (Test results are mean value of 6 tests for each model)
Test Results No. AC-2 h = 5 cm Asphalt Concrete

Test Items	. 5			Spec.	Model No. 11	Model No. 15
Mixing Laying Temperature °C	g Tempera	ta .	် ပ	1	158	153
Layer Thickness	ess					
from Core Sample	mple		E	i	O	ro ro
Core Density		ы	gr/m3	1	2.275	2.263
Compaction Degree	egree		×	764	98.6	7.76
Grading:	19	튍	×	100	100	100
% Passing	4.75		×	45 - 65	61	29
a Sieve	2.36	E C	×	33 - 53	46	45
	0.300	E	×	10 - 20	13	12
	0.075	篇	×	80 I 69	4	w
Asphalt Content	tent	1	* :	5:7	5.69	5.67

TABLE 45-1 MODEL NO. 17: AC 5 cm SURFACE COURSE

5.70 Samp le No. 3 149 45 (Marshall test results are mean value of 3 specimens for each sample) 5.90 г. :3 100 57 44 14 5 Sample No. 2 149 2.451 5.82 5.2 Samp]e 100 61 46 13 No. 1 2,864 149 12 Tolerance 3 - 16 - 6 5.4 - 6.2 48 - 62 39 - 47. 129 - 149 3 - 7 Job-mix 11 ~ 19 70 - 80 >1,200 1b 0.01 in x x gr/cm² Mixing Temperature °C 0.075 mm 2.36 mm 0.300 mm Asphalt Content * 4.75 Void Filled Test Items Marshal Test Stability Air Voids Densi ty % Passing Grading: F]0¥ a Sieve

Remarks ::

L / Lane, Sta. 0 + 264 to 0 + 400 Sample No. 1, 2, 3: Date of Placing: Sept. 25, 1990 Location:

Sample meets Job-mix requirements.

* Percente by Weight of Total Aggregates

MODEL NO. 17: AC 5 CM SURFACE COURSE TABLE 45-2

Test Items	SW			Job-mix Tolerance	Sample No. 4	Sample No. 5	Sample No. 6
Mixing Temperature	erature	δ	,	129 - 149	149	149	149
Marshal Tes	بيد	}					
Density		gr/cm3	e E		2.451	2.445	2,451
Stability			٩	>1.200	2,797	2,427	2,758
F}ow	0	0.01 in	ni	8 - 16	14	 	H,
Air Voids	•	:	<b>X</b>	9 1 8	3.4	4.	ເກ ເກີ
Void Filled	eq		**	70 - 80	71	11.	17.
Asphalt Content *	tent *			5.4 - 6.2	5.87	6.00	5.94
Grading:	19	<b>E</b>	*	100	100	100	100
* Passing	4.75		×	48 - 62	61	09	5
a Sieve	2.36	E	×	39 - 47.	43	45	42
	0.300	Ē	×	11 - 19	19	12	en Fi
	0.73	E	*	2 1 2	uf	Lr	uc

Remarks:

Sample No. 4, 5: Date of Placing: Oct. 4, 1990

Location:

L / Lane, Sta. 0 + 200 to 0 + 264 R / Lane, Sta. 0 + 290 to 0 + 400 Sample No. 6 : Date of Placing: Oct. 5, 1990

R / Lane, Sta. 0 + 200, to 0 + 290 Location:

* Percente by Weight of Total Aggregates Sample meets Job-mix requirements.

TABLE 46-1 MODEL NO. 18: PCC 18 cm FLEXURAL STRENGTH OF PCC

TABLE 46-2 MODEL NO. 18: PCC 28 cm FLEXURAL STRENGTH OF PCC

Location			9		ים תמלאי ואנש וליבון	2,500	ŧ				3	1040 0 10 10 10 01	101
Aug. 2, 1990 No.	-	2.5 in		4.75	Į	Sept.	Sept. 5, 1990	No or	(n)	in.			(546)
Right Lane		3 in		3.89	(564)	Left Lane	ane		(°)	E.	••	3.89	(564)
Sta. 0 + 000		3 in	· · ·	3.77	(546)	Sta. 0.+ 000	+ 000		es	in	•	3.89	(564)
Sta. 0 + 094.5			Average	4.14	(009)	Sta. 0	to 0 + 150			<b>4</b> €	Average	3.85	(585)
. No.		2.5 in		4.01	(582)			No. 6	က	. <b>.</b>	i	3.89	(564)
		2.5 in		4.26	(618).				က	u.		3.54	(529)
		2.5 in		4.14	(009)					<b>G</b> 1		7.01	(289)
		:	Average	4.14	(009)					∢.	Average	3.85	(558)
Aug. 15, 1990 No.	en	2.5 in		4.26	(618)			No. 7	(2)	Ę		3.64	(529)
Right Lane		. 3 In		4.51	(654)				<b>e</b>	13		3.64	(223)
Sta. 0 + 094.5		2.75 in.		4.51	(654)				ຕ	i a		3.77	(546)
to	-		Average	4.43	(642)			÷.	**.	*	Average	3.58	(532)
Sta. 0 + 200						1000	Sent 6 1990	a or	-			30	(407)
, cN	7	. 62		. A	(707)	Left Lane	ane		e ez	: <u>:</u>			(654)
	ı	e in		4.26	-	Sta. 0 + 150	+ 150		က	<u> </u>			(529)
		3 in		- 4.39		O ₁		-	-	•	Average	3.64	(523)
The state of the second series of the second		:	Average	1ge 4.51	(654)	Sta. 0 +	+ 200		:	:	:		}
								**		**. . *	•		

TABLE 47 MODEL NO. 17: AC 5 CM SURFACE COURSE

Core Sample Test

4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4		ć	Left	Left Lane	Right Lane	Lane
SEC. 1 (5)		shec.	0 + 210	0 + 380	0 + 210 6 + 380 0 + 210 0 + 390	0 + 390
Layer Thickness						
from Core Sample	g	5.0	6.2	6.2	es es	4.8
Core Density	gr/cm ³		2.384	2.349	2.463	2.344
Laboratory Density	ST/Cm3		2.486	2.458	2.589	2.452
Compaction Degree	×	787	97.46	95.56	95.13	95.60

TABLE 48 MODEL NO. 18: PCC 18 on SURFACE COURSE

		Core	Core Sample Test			
Toc+ 1+smc		6 6 6	Left Lane	Lane	Right Lane	Lane
C + C + C + C + C + C + C + C + C + C +		2 2 2 3 3 4 3 4 3 5 5 5 5 5 5 5 7 5 7 7 7 7 7 7 7 7 7 7	010 + 0	0 + 190	0+010 0+190 0+010 0+190	0 + 190
Layer Thickness						
from Core Sample	E	ст 18.0	19.2	18.6	20.6	19.0

Appendix - C

## AXLE LOAD EQUIVALENCY FACTORS

Axia load equivalency factors for flexible pavements, single axies and  $\rho_t$  of 2.0. The results of the second

Axle Load		Pavem	ent Structi	ıral Numbe	r (SN)	
(kips)	1	2	3	4	5	6
2	.0002	.0002	,0002	.0002	.0002	.0002
4	.002	.003	.002	.002	.002	.002
-6	.009	.012	.011	.010	.009	.009
. 8	.030	.035	.036	.033	.031	.029
. 10	.075	.085	.090	.085	.079	.076
. 12	.165	.177	.189	.183	174	.168
14	.325	.338	.354	.350	.338	.331
16	.589	.598	.613	.612	.603	.596
- 18	1.00	1:00	1.00	1.00	1.00	1.00
20	1.61	1.59	1.56	1.55	1.57	1.59
22	2.49	2.44	2.35	2.31	2.35	2.41
24	3.71	3.62	3.43	3.33	3.40	3.51
26	5.36	5.21	4.88	4.68	4.77	4.96
28	7.54	7.31	6.78	6.42	6.52	6.83
30	10.4	10.0	9.2	8.6	8.7	9.2
32	14.0	13.5	12.4	11.5	11.5	12.1
34	18.5	17.9	16.3	15.0	14.9	15.6
3,6	24.2	23.3	21.2	19.3	19.0	19.9
38	31.1	29.9	27.1	24.6	24.0	25.1
.40	39.6	38.0	34.3	30.9	30.0	31.2
42	49.7	47.7	43.0	38.6	37.2	38.5
44	61.8	59.3	53.4	47.6	45.7	47.1
46.	76.1	73.0	65.6	58.3	55.7	57.0
48	92.9	89.1	80.0	70.9	67.3	68.6
50	113.	108.	97.	86.	81.	82.

Axle load equivalency factors for flexible pavements, tendem axles and  $\boldsymbol{p}_t$  of 2.0.

	Axle Load		Pavem	ent Structu	ıral Numbe	r (SN)	41 9
_	(kips)	1	2	3	4	5	. 6 💠
-	2	.0000	.0000	.0000	.0000	.0000	.0000
	- 4	.0003	.0003	.0003	.0002	.0002	.0002
	6	.001	.001	.001	.001	.001	.001
	8	.003	.003	.003	.003	.003	.002
	10	.007	.008	.008	.007	.006	.006
	-12	.013	.016	.016	.014	.013	.012
	14	.024	.029	.029	.026	.024	.023
	16	.041	.048	.050	.046	.042	.040
	18	.066	:077	.081	075	.069	.066
	20	.103	.117	.124	117	.109	.105
	22	.156	.171	.183	174	164	158
	24	.227	.244	.260	252	.239	231
	26	.322	.340	.360	.353	.338	.329
	28	.447	.465	.487	.481	.466	.455
	30	.607	.623	.646	643	.627	.617
	32	.810	.823	.843	.842	.829	819
	34	1.06	1:07	1.08	1.08	1.08	1.07
	36	1.38	1.38	1.38	1.38	1.38	1.38
	38.	1.76	1.75	1.73	1.72	1.73	1.74
	40	2.22	2.19	2.15	2.13	2.16	2.18
	42	2.77	2.73	2.64	2.62	2.66	2.70
	44	3.42	3.36	3.23	3.18	3.24	3.31
	46	4.20	4.11	3.92	3.83	3.91	4.02
	48	5.10	4.98	4.72	4.58	4.68	4.83
	50	6.15	5.99	5.64	5.44	5.5 <del>6</del>	5.77
	52	7.37	7.16	6.71	6.43	6.56	6.83
	54	8.77	8.51	7.93	7.55	7.69	8.03
	56	10.4	10.1	9.3	8.8	9.0	9.4
	58	12.2	11.8	10.9	10.3	10.4	10.9
	60	14.3	13.8	12.7	11.9	12.0	12.6
	62	16.6	16.0	14.7	13.7	13.8	14.5
	64	19.3	18.6	17.0	15.8	15.8	16.6
	66	22.2	21.4	19.6	18.0	18.0	18.9
	68	25.5	24.6	22.4	20.6	20.5	21.5
	70	29.2	28.1	25.6	23.4	23.2	24.3
	72	33.3	32.0	29.1	26.5	26.2	27.4
	74	37.8	36.4	33.0	30.0	29.4	30.8
	76	42.8	41.2	37.3	33.8	33.1	34.5
	78	48.4	46.5	42.0	38.0	37.0	38.6
	80	54.4	52.3	47.2	42.5	41.3	43.0
	82	61.1	58.7	52.9	47.6	46.0	47.8
	84	68.4	65.7	59.2	53.0	51.2	53.0
	86	76.3	73.3	66.Q	59.0	56.8	58.6
	88	85.0	81.6	73.4	65.5	62.8	64.7
	90	94.4	90.6	81.5	72.6	69.4	71.3

Axle load equivalency factors for flexible pavements, single axles and p_t 2.5.

Axle Load	4 - Z1	Pavem	ent Structu	ıral Numbe	r (SN)	
(kips)	1 ;	2,,	3	4	5	6
		· · · · · · · · · · · · · · · · · · ·				
. 2	.0004	.0004	.0003	.0002	.0002	.0002
4	,003	.004	.004	.003	.002	.002
6	.011	.017	.017	.013	.010	.009
-8	.032	.047	.051	.041	.034	:031
10	.078	.102	118	.102	.088	.080
12	.168	198	.229	.213	.189	.176
14	.328	.358	.399	:388	.360	.342
16	.591	.613	.646	.645	.623	.606
18	1,00	1.00	1.00	1.00	1.00	1.00
20	1.61	1,57	1.49	1.47	1.51	1.55
22	2.48	2.38	2.17	2.09	2.18	2.30
24	3,69	3.49	3.09	2.89	3.03	3.27
26	5,33	4.99	4.31	3.91	4.09	4.48
28	7.49	6.98	5.90	5.21	5.39	5.98
:30	10.3	9.5	7.9	6.8	7.0	7.8
32	13,9	12.8	10.5	8.8	8.9	10.0
34	18.4	16.9	13.7	11.3	11.2	12.5
36	24.0	22.0	17.7	14.4	13.9	15.5
38	30.9	28.3	22.6	18.1	17.2	19.0
40	39.3	35.9	28.5	22.5	21.1	23.0
42	49.3	45.0	35.6	27.8	25.6	27:7
44	61.3	55.9	44.0	34.0	31.0	33.1
46	75.5	68.8	54.0	41.4	37.2	39.3
48	92.2	83. <del>9</del>	65.7	50.1	44.5	46.5
50	112.	102.	79.	60.	53.	55.

र्व का अपन्य (Axie) load equivalency factors for flexible pavements, tandem axies and p_tof 2.5% है कि उसके अपनित्र

	Axle	rii.	1 1 4 4 1.50 €				
	Load (kips)	1	2	3	4	5	6
•	2	.0001	.0001	.0001	:0000	.0000	.0000
	4	.0005	.0005	.0004	.0003	.0003	.0002
	6	.002	.002	.002	.001	.001	.001
	8	.004	.006	.005	.004	.003	.003
	10	.008	.013	.011	.009	.007	.006
	12	.015	024	.023	.018	.014	.013
	14	.026	.041	.042	.033	.027	.024
	16	044	.065	.070	.057	.047	.043
	18	.070	.097	.109	.092	.077	.070
	20	.107	.141	.162	141	.121	.110
	22	.160	198	.229	.207	.180	.166
	24	.231	.273	.315	.292	.260	.242
	26	.327	.370	.420	.401	.364	.342
	28	.451	493	.548	.534	.495	.470
	30	.611	.648	.703	.695	.658	.633
	32	.813	.843	.889	.887	.857	.834
	34	1.06	1.08	1.11	1.11	1.09	1.08
	36	1.38	1.38	1.38	1.38	1.38	1.38
	38	1.75	1.73	1.69	1.68	1.70	1.73
	40	2.21	2.16	2.06	2.03	2.08	2.14
	42	2.76	2.67	2.49	2.43	2.51	2.61
	44	3.41	3.27	2.99	2.88	3.00	3.16
	46	4.18	3.98	3.58	3.40	3.55	3.79
	48	5.08	4.80	4.25	3.98	4.17	4.49
	50	6.12	5.76	5.03	4.64	4.86	5.28
	52	7.33	6.87	5.93	5.38	5.63	5.17
	54	8.72	8.14	6.95	6.22	6.47	7.15
	56	10.3	9.6	8.1	7.2	7.4	8.2
	58	12.1	11.3	9.4	8.2	8.4	9.4
	60	14.2	13.1	10.9	9.4	9.6	10.7
	62	16.5	15.3	12.6	10.7	10.8	12.1
	64	19.1	17.6	14.5	12.2	12.2	13.7
	66	22.1	20.3	16.6	13.8	13.7	15.4
	68	25.3	23.3	18.9	15.6	15.4	17.2
	70	29.0	26.6	21.5	17.6	17.2	19.2
	72	33.0	30.3	24.4	19.8	19.2	21.3
	74	37.5	34.4	27.6	22.2	21.3	23.6
	76	42.5	38.9	31.1	24.8	23.7	26.1
	78	48.0	43.9	35.0	27.8	26.2	28.8
	80	54.0	49.4	39.2	30.9	29.0	31.7
	82	60.6	55.4	43.9	34.4	32.0	34.8
	84	67.8	61.9	49.0	38.2	35.3	38.1
	86	75.7	69.1	54.5	42.3	38.8	41.7
	88	84.3	76.9	60.6	46.8	42.6	45.6
	90	93.7	85.4	67.1	51.7	46.8	49.7
						- · <del>-</del>	

Axle load equivalency factors for rigid pavements, single axles and p_tof 2.0.

Axle Load	Slab Thickness, D (inches)									
(kips)	6	7.	8	9	10	11	12	13	14.\	
2	.0002	.0002	.0002	.0002	.0002	.0002	.0002	.0002	.0002	
4	.002	002	.002	.002	.002	:002	.002	:.002	.002	
6	.011	010	.010	.010	.010	.010	.010	.010	.010	
:8:	035	.033	.032	.032	.032	.032	.032	.032	.032	
10	087	.084	.082	.081	.080	.080	.080	.080	080	
12	,186	.180	.176	.175	.174	.174	.173	.173	.173	
14	.353	346	:341	.338	.337	.336	.336	.336	.336	
16	.614	609	604	.601	.599	.599	.598	.598	.598	
18	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
20.	1.55	1.56	1.57	1.58	1.58	1.59	1.59	1.59	1.59	
22	2.32	2.32	2.35	2.38	2.40	2.41	2.41	2.41	2.42	
24	3.37.	3.34	3.40	3.47	3.51	3.53	3.54	3.55	3.55	
26	4:76	4.69	4.77	4.88	4.97	5.02	5.04	5.06	5.06	
28	6.58	6.44	6.52	6.70	6.85	6.94	7.00	7.02	7.04	
30	8.92	8.68	8.74	8.98	9.23	9.39	9.48	9.54	9.56	
32	11.9	11.5	11.5	11.8	12.2	12.4	12.6	12.7	12.7	
34	15.5	15.0	14.9	15:3	15:8	16.2	16.4	16.6	16.7	
36	20.1	19.3	19.2	19.5	20.1	20.7	21.1	21.4	21.5	
38	25.6	24.5	24.3	24.6	25.4	26.1 ·	26.7	27.1	27.4	
40	32.2	30.8	30.4	30.7	31.6	32.6	33.4	34.0	34.4	
42	40.1	38.4	37.7	38.0	38.9	40.1	41.3	42.1	42.7	
44	49.4	47.3	46.4	46.6	47.6	49.0	50.4	51.6	52.4	
46	60.4	57.7	56.6	56.7	57.7	59.3	61.1	62.6	63.7	
48	73.2	69.9	68.4	68.4	69.4	71.2	73.3	75.3	76:8	
50	88.0	84.1	82.2	82.0	83.0	84.9	87.4	89.8	91.7	
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Axie load equivalency factors for rigid pavements, tandem axies and  $\mathbf{p}_{t}$  of 2.0.

Axle Load	Slab Thickness, D (inches)									
(kips)	6	7	8 :	9	10	11	12	13	1.4:	
2	.0001	:.0001	.0001	.0001	.0001	.0001	.0001	,0001	.0001	
4	.0006	.0005	.0005	.0005	.0005	,0005	.0005	.0005	.0005	
6	.002	.002	.002	.002	.002	.002	.002	.002	.002	
8	.006	.006	.005	.005	.005	.005	.005	.005	.005	
10	:014	.0.13	.013	.012	.012	.012	.012	.012	.012	
12	.028	.026	.026	.025	.025	.025	.025	.025	.025	
14	.051	.049	.048	.047	.047	.047	.047	.047	.047	
16	.087	.084	.082	.081	.081	.080	.080	.080	.080	
18	.141	.136	.133	.132	.131	.131	.131	.131	.131	
20	.216	.210	.206	.204	.203	.203	.203	.203	.203	
22	.319	.313	.307	.305	.304	.303	.303	.303	.303	
24	.454	.449	.444	.441	.440	.439	.439	439	.439	
26	.629	.626	.622	.620	.618	.618	.618	.618	.618	
28	.852	.851	.850	.850	.850	.849	.849	.849	.849	
30	1.13	1.13	1.14	1.14	1.14	1.14	1.14	1.14	1.14	
32	1.48	1.48	1.49	1.50	1.51	1.51	1.51	1.51	1.51	
34	1.90	1.90	1.93	1.95	1.96	1.97	1.97	1.97	1.97	
36	2.42	2.41	2.45	2.49	2,51	2.52	2.53	2.53	2.53	
38	3.04	3.02	3.07	3.13	3.17	3.19	3.20	3.20		
40	3.79	3.74	3.80	3.89	3.17	3.19	4.00		3.21	
42	4.67	4.69	4.66	4.78	4.87	4.93	4.00	4.01	4.01	
44	5.72	5.59	5.67	5.82	4.87 5.95	4.93	4.95	4.97	4.97	
46	6.94	6.76	6.83	7.02		6.03 7.31	6.07	6.09	6.10	
48	8.36	8.12	8.17	7.02 8.40	7.20 8.63	7.31 8.79	7.37	7:41	7.43	
50	10.00	9.39	9.72	9.98	10.27	0.79	8.88	8.93	8.96	
52	11.9	11.5	11.5		12.1	10.49	10.62	10.69	10.73	
54	14.0	13.5	13.5	11.8	12.1	12.4	12.6	12.7	12.8	
56	16.5	15.9		13.8	14.2	14.6	14.9	15.0	16.1	
58	19.3	18.5	15.8	16.1	16.6	17.1	17.4	17.6	17.7	
	22.4		18.4	18.7	19.3	19.8	20.3	20.5	20.7	
60 62		21.5	21.3	21.6	22.3	22.9	23.5	23.8	24.0	
	25.9	24.9	24.6	24.9	25.6	26.4	27.0	27.5	27.7	
64	29.9	28.6	28.2	28.5	29.3	30.2	31.0	31.6	31.9	
66	34.3	32.8	32.3	32.6	33.4	34.4	<b>95.4</b>	36.1	36.5	
68	39.2	37.5	36.8	37.1	37.9	39.1	40.2	41.1	41.6	
70	44.6	42.7	41.9	42.1	42.9	44.2	45.5	46.6	47.3	
72	50.6	48.4	47.5	47.6	48.5	49.9	51.4	52.6	53.5	
74	57.3	54.7	53.6	53.6	54.6	56.1	57.7	59.2	60.3	
76	64.6	61.7	60.4	60.3	61.2	62.8	64.7	66.4	67.7	
78	72.5	69.3	67.8	67.7	68.6	70.2	72.3	74.3	75.8	
80	81.3	77.6	75.9	75.7	76.6	78.3	80.6	82.8	84.7	
82	90.9	86.7	84.7	84.4	85.3	87.1	89.6	92.1	94.2	
84	101.	97.	94	94.	95.	97.	99.	102.	105.	
86	113.	107.	105.	104.	105.	107.	110.	113.	116.	
88	125.	119.	116.	116.	116.	118.	121.	125.	128.	
		132.								

Axie load equivalency factors for rigid pavements, single axies and  $\mathbf{p_{t}}$  of 2.5.

Axie Load	Slab Thickness, D (Inches)										
(kips)	6	7	8	9	10	11	12	13	14		
2	.0002	.0002	.0002	.0002	.0002	.0002	.0002	.0002	.0002		
4	.003	.002	.002	.002	.002	.002	.002	.002	.002		
6	.012	.011	.010	.010	.010	.010	.010	.010	.010		
6 8	.039	.035	.033	.032	.032	.032	.032	.032	.032		
10	.097	.089	.084	.082	.081	.080	.080	.080	.080		
12	.203	.189	.181	.176	.175	.174	.174	.173	.173		
14	.376	.360	.347	.341	.338	.337	.336	.336	.336		
16	.634	.623	.610	.604	.601	.599	.599	.599	.598		
18	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		
20	1.51	1.52	1.55	1.57	1.58	1.58	1.59	1.59	1.59		
22	2.21	2.20	2.28	2.34	2.38	2.40	2.41	2.41	2.41		
24	3.16	3.10	3.22	3.36	3.45	3.50	3.53	3.54	3.55		
26	4.41	4.26	4.42	4.67	4.85	4.95	5.01	5.04	5.05		
28	6.05	5.76	5.92	6.29	6,61	6.81	6.92	6.98	7.01		
30	8.16	7.67	7.79	8:28	8.79	9.14	9.35	9.46	9.52		
32	10.8	10.1	10.1	10.7	11.4	12.0	12.3	12.6	12.7		
34	14.1	13.0	12.9	13.6	14.6	15.4	16.0	16.4	16.5		
36	18.2	16.7	16.4	17.1	18.3	19.5	20.4	21.0	21.3		
38	23.1	21.1	20.6	21.3	22.7	24.3	25.6	26.4	27.0		
40	29.1	26.5	25.7	26.3	27.9	29.9	31.6	32.9	33.7		
42	36.2	32.9	31.7	32.2	34.0	36.3	38.7	40.4	41.6		
44	44.6	40.4	38.8	39.2	41.0	43.8	46.7	49.1	50.8		
46	54.5	49.3	47.1	47.3	49.2	52.3	55.9	59.0	61.4		
48	66.1	59.7	56.9	56.8	58.7	62.1	66.3	70.3	73.4		
50	79.4	71.7	68.2	67.8	69.6	73.3	78.1	83.0	87.1		

Axis load equivalency factors for rigid pavements, tandem exist and  $\mathbf{p_t}$  of 2.5.

Axle Load			and the second	1.5		10/4 A			
(kips)	6	7	8	91.	10	11/	12	13	14:8
2	::.0001	0001	:0001	.0001	.0001	⊥. <b>00</b> 01	.0001	.0001	.0001
4	.0006	.0006	.0005	.0005	.0005	.0005	.0005	∴0005	.0005
6	.002	.002	.002	.002	.002	.002	.002 .005 .012	002	.002
. 8	.007	.006	.006 .013	.005	.005	.005 .012	.005	.005	.005
10	.015	.014	:013	.013	.012	.012	.012	.012	.012
12	.031	.028	.026	026	.025	.025	.025	.025	.025
:14	.057	.052	.049	∴048	.047	.047	.047	.047	.047
16	.097	.089	.084	.082	.081	.081	.080	.080	.080
18	.155	.1,43	.136	133،	.132	:1.31	.131	.131	.131
20	.234	.220	.211	.206	.204	203	.203	.203	.203
22	.340	.325	:313	.308	.305	304	303	.303	.303
24	475	.462	.450	:444	.441	440	.439	.439	.439
26	644	.637	.627	:622	.441 .620	619	.618	.618	.618
28	855	.854	.852	:850	850	.850	.849	.849	.849
30	1,140	1.12	1:13	1.14	1:14	1.14	1.14	1.14	1.14
32	1.43	1.44	1.47	1.49	1.50	1.51	1.51	1.51	1.51
34	1.82	1.82	1.87	1.92	1.95	1.96	1.97	1.97	1.97
36	2.29	2.27	2.35	2.43	2.48	2.51	2.52	2.52	2.53
38	2.85	2.80	2.91	3.03	3.12	3.16	3.18	3.20.	3.20
40	3.52	3.42	3.55	3.74	3.87	3.94	3.98	4.00	4.01
42	4.32	4.16	4.30	4.55	4.74	4.86	4.91	4.95	4.96
44	5.26	5.01	5.16	5.48	5.75	5.92	6.01.	6.06	6.09
46	6.36	6.01	6.14	6.53	6.90	7.14	7.28	7.36	7.40
48	7.64	7.16	7.27	7.73	8.21	8.55	8.75	8.86	8.92
50	9.11	8.50	8.55	9.07	9.68	10.14	10.42	10.58	10.66
52	10.8	10.0	10.0	10.6	11.3	11.0	12.3	12.5	12.7
54	12.8	11.8	11.7	10.6 12.3	13.2	11.9 13.9	14.5	14.8	14.9
56	15.0	13.8	13.6	14.2	15.2	16.2	16.8	17.3	17.5
58	17.5	16.0	15.7	16.3	17.5	18.6	19.5	20.1	20.4
60	20.3	18.5	18.1	18.7	20.0	21.4	18.5	23.2.	23.6
62	23.5	21.4	20.8	21.4	22.8	24.4	22.5	26.7	27.3
64	27.0	24.6	23.8	21.4 24.4	25.8	27.7	25.7	20.7 30.5	31.3
66	31.0	24.0 28.1	23.6 27.1	24.4	29.2	21.7	29.3	30.5	35.7
68	35.4	32.1	30.9	27.6	32.9	31.3	33.2	34.7	30.7 40.5
		32, I	30.9	31.3	32.9	35.2	37.5	39.3	40.5
70	40.3	36.5	35.0	35.3	37.0	39.5	42.1	44.3	45.9
72	45.7	41.4	39.6	39.8	41.5	44.2	47.2	49.8	51.7
74	51.7	46.7	44.6	44.7	46.4	49.3	52.7	55.7	58.0
76 70	58.3	52.6	50.2	50.1	51.8	54.9	58.6	62.1	64.8
78	65.5	59.1	56.3	56.1	57.7	60.9	65.0	69.0	72.3
80	73.4	66.2	62.9	62.5	64.2	67.5	71.9	76.4	80.2
82	82.0	73.9	70.2	69.6	71.2	74.7	79.4	84.4	88.8
84	91.4	82.4	78.1	77.3	78.9	82.4	87.4	93.0	98.1
86	102.	92.	87.	86.	87.	91.	96.	102.	108.
88									
90	113. 125.	102. 112.	96. 106.	95. 105.	96. 106.	100. 110.	105. 115.	112. 123.	119. 130.

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